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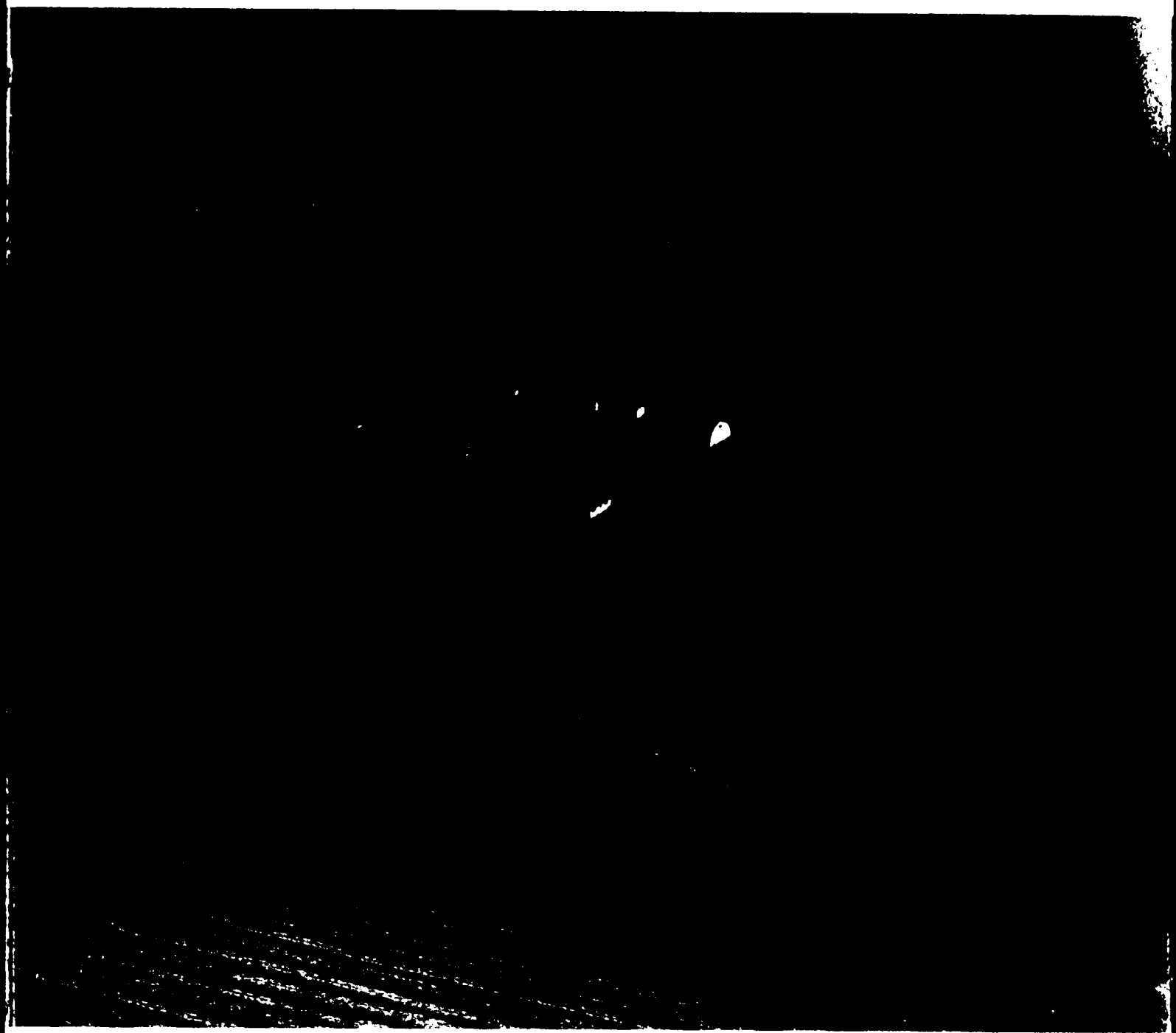
GRAIN and RAIL IN WESTERN CANADA



THE REPORT OF THE GRAIN HANDLING AND TRANSPORTATION COMMISSION

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GRAIN AND RAIL

IN

WESTERN CANADA

VOLUME I

April 18, 1977.

The Honourable Otto E. Lang, P.C., M.P.,
Minister of Transport, and Minister
Responsible for the Canadian Wheat Board,
House of Commons,
OTTAWA, Ontario.

Sir:

We, the Commissioners of the Grain Handling and Transportation Commission, appointed by Orders-in-Council PC 1975-872 and PC 1975-1067:

> To inquire into the rail needs of communities, the economies of a modernized rail system and the probable conduct of producers and elevator companies in changing circumstances for the purpose of making recommendations concerning the future role of that portion of the rail network identified for further evaluation

Now submit our Report, which the Commission believes will improve and increase the capacity and efficiency of the Western grain transportation and handling system for performance of its export functions, and will also improve the economic development opportunities in terms of agricultural processing, manufacturing and natural resource development of Western Canada.

A compendium of our major research projects will be submitted as a separate volume within two weeks. A third volume, consisting of relevant statistical material is in preparation and will be available before the end of May.

GRAIN AND RAIL

IN

WESTERN CANADA

GRAIN AND RAIL IN WESTERN CANADA

VOLUME I

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A. THE COMMISSION

i) Appointment of Commission

Transportation has always played a vital part in the Canadian grains industry. Canada's unique geography, the location of its major grain growing areas, and the sheer size of the country have, since the earliest days of agriculture on the prairies, made it incumbent upon Canada to have not only a good grain handling and transportation system, but the best system it could afford to meet its needs.

The unique Canadian situation is unlike any other major grain growing and exporting country. Canada is absolutely dependent on rail transport to move grain from where it is grown to export position.

The prairie grain growing area is landlocked, about 800 miles from the nearest port, surrounded by formidable geographic barriers; on the west, the Rocky Mountains; on the north, a waterway normally used only 12 weeks a year; on the east, the rugged terrain of the Canadian shield and a river system open only about eight months of the year.

Hand in hand with these limiting geographic features are the significant increases in production and export of western grains and oilseeds over the past few years, to the point where three years in a row Canada's handling and transportation system handled approximately one billion bushels annually. To do this has placed

an added strain on a system that is essentially unchanged from when it was completed 50 years ago.

When the prairie grain handling system was built, it was in a different era and meant for different conditions and levels of production.

Some forecasters tell us that by 1980, for Canada to maintain her share of world production and trade, western producers could be faced with the production of 1.5 billion bushels a year. This was undreamed of 50 years ago.

This is not to imply that there have been no changes in the grain handling and transportation system over 50 years. In addition to the establishment of the Canadian Wheat Board and delivery quotas, there have been others. One is the block shipping system, introduced by the Canadian Wheat Board and the industry. Another is the appointment by the federal government of grain movement coordinators to expedite traffic at the Thunder Bay and Vancouver ports. A third is the purchase by the federal government of a fleet of six thousand grain hopper cars, with two thousand more now being contracted for. A fourth is the amalgamation of grain elevator companies and the reduction in numbers of elevators, and now the emergence of the so-called inland terminals.

But none of these changes have been enough. To date, no one has, in a concrete way, come to grips with some of the more fundamental problems in the grain handling and transportation system. One of the more basic of these is the deterioration of the branch

rail lines in the prairie provinces, and the aging of primary elevators built a half century ago.

Before 1933, the railways were free to abandon branch lines as they saw fit. That year, an amendment was passed to the Railway Act requiring the railways to obtain permission to abandon from the Board of Transport Commissioners. During the Second World War, from about 1941 on, the needs of the war effort brought further abandonment proceedings to a halt. After the war, there was a need for the railways to upgrade many of their facilities and substantial investments were made in many areas, but not on branch lines. In that same period -- the late 1940's and early 1950's -- little thought was given to the existence of the overbuilt branch line network and its relationship to alleged financial losses arising from the statutory grain rate.

It was not until the MacPherson Commission in the late 1950's and early 1960's that the magnitude of the branch lines problem was identified.

In the early 1960's, the railways applied for a number of branch line abandonments, leading to concern in many quarters over the type of system which would be left after such piece-meal abandonments.

The Commission also led to the development and passage of the National Transportation Act in 1967. With the intention of passing legislation providing a more comprehensive and reasonable basis for branch line abandonments, the government requested the railways

to place a moratorium on branch line abandonments in the prairie provinces.

The railways agreed and from 1963 to the passage of the Act in 1967, only four cases were dealt with. Following passage of the National Transportation Act, the federal government passed an Order-in-Council which prohibited the railways from applying for abandonment of all lines in Western Canada except 1,839 miles. In July, 1973, at the Western Economic Opportunities Conference in Calgary, it was announced that abandonment of these miles was also prohibited and the entire system was frozen until January 1, 1975.

In December, 1974, the federal government announced that a basic network of 12,413 miles of line in the prairies was protected until the year 2000 called Category "A" lines; 525 miles of line called Category "C" lines which were no longer in use were left unprotected; and, finally, 6,283 miles of line designated as Category "B" lines were frozen for at least a year -- this freeze has now been extended until June 30, 1977.

To undertake a series of Regional inquiries in areas served by the 6,283 miles of branch lines in Category "B", and make recommendations as to their future disposition, the Government appointed this Commission of Inquiry under Part I of the Inquiries Act by Order-in-Council No. PC 1975-872.

PC 1975-872

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 18 April, 1975.

WHEREAS there is an express need to improve and increase the capacity and efficiency of the western grain transportation and handling system for the performance of its export functions;

AND WHEREAS the Government of Canada has guaranteed 6,283 route miles of branch lines in the provinces of Manitoba, Saskatchewan and Alberta against abandonment until at least January 1st, 1976 in order to provide an opportunity for assessing future transportation requirements.

AND WHEREAS it is desired to provide a means for investigating the future disposition of the branch lines in question.

THEREFORE, THE COMMITTEE OF THE PRIVY COUNCIL, on the recommendation of the Minister of Transport and the Minister responsible for the Canadian Wheat Board, advise that, pursuant to Part I of the Inquiries Act, Mr. Emmett Hall of Saskatoon, Saskatchewan, be appointed Chief Commissioner and Mr. R.E. Forbes of Brandon, Manitoba, be appointed Commissioner:

1) To inquire into the rail needs of communities, the economies of a modernized rail system and the probable conduct of producers and elevator companies in changing circumstances for the purpose of making recommendations concerning the future role of that portion of the rail network identified for further evaluation; and

2) For the purpose of reporting in respect of the matters referred to in paragraph 1) to receive evidence from any person, any interested agency, group or corporation, any representative of the federal, provincial, regional or municipal government and any representative of any jurisdiction outside Canada who desires or may be invited to give evidence.

The Committee further advises that:

(a) The Chief Commissioner be authorized to adopt such practices and procedures for all purposes of the inquiry as he may from time to time deem expedient for the proper conduct of the inquiry and to vary those practices and procedures from time to time;

(b) The Commissioners be authorized and requested to sit at such times and places within Canada as the Chief Commissioner may from time to time decide;

(c) The Minister of Transport in consultation with the Minister responsible for the Wheat Board be authorized to designate a Secretary of the Commission and such further and other inquiry officers, clerical and office assistance as may be necessary to aid and assist the Commissioners in this Inquiry;

(d) The Minister of Transport be authorized to provide such space for officers and hearing rooms for the Commission as the Chief Commissioner may deem necessary or advisable;

(e) The Chief Commissioner following the conclusion of each regional inquiry submit a report and recommendations to the Minister of Transport and the Minister Responsible for the Canadian Wheat Board with all reasonable dispatch; and

(f) The Commissioners be authorized to exercise all powers conferred on Commissioners by Parts I and III of the Inquiries Act.

****

(Mr. R.H. Cowan of Rosetown, Saskatchewan, Mr. Lloyd Stewart of Rock Glen, Saskatchewan and Mr. Rheinhold Lehr of Medicine Hat, Alberta were appointed on May 9th, 1975 by Order-in-Council) PC-1975-1067.

ii) Terms of Reference and Objectives

a) Purpose

A Commission of Inquiry has been appointed under the provisions of Part 1 of the Inquiries Act consisting of a Chief Commissioner, four Commissioners, four Inquiry Officers and a Secretariat in order to undertake a series of regional inquiries as specified by Order-in-Council number PC 1975-872. In conducting its investigations, the Commission will be primarily concerned with an evaluation of rail requirements, the response of grain producers, elevator companies and the communities to changing circumstances, and the socio-economic impact of an evolving network.

b) Powers of the Commission

The Commission is empowered to conduct hearings in the areas concerned, to summon witnesses, to require the production of documents, to receive submissions orally or in writing and to assume all other powers applicable under Parts 1 and III of the Inquiries Act. The Commission shall make recommendations to the Minister of Transport and the Minister Responsible for the Canadian Wheat Board.

c) Terms of Reference

In view of the complexity of the regional rail network and the diversity of the Prairie economy, the Inquiry Commission will devise an appropriate regional breakdown for the evaluation process. The regionalization methodology will reflect some subdivision based on such criteria as may be chosen by the Commission.

For the purpose of ensuring the maximum degree of public awareness concerning the nature of the inquiry process, a Commissioner or a designated representative will visit communities in order to:

1) explain the composition and powers of the Inquiry Commission;

2) explain the rationale employed for the regional breakdown and indicate the precise region into which each community falls;

3) explain the procedures to be adopted for public hearings; and

4) indicate the timing and location of public hearings.

One or more Commissioners will hold hearings at centres in each region in order to give everybody concerned the opportunity to express their views and to present arguments with regard to the matters under study. Hearings will be held at such times and places as the Commission may determine.

In conducting a comprehensive evaluation of regional transportation requirements, the Commission shall give full consideration to the implications of adjustments to the total grain handling and transportation system as they relate to the following areas:

1) the grain producers, in terms of the farm to elevator trucking patterns, trucking costs and the level of elevator and rail service;

2) the communities as they relate to provincially determined rural development objectives and overall requirements for transportation and basic infrastructure planning;

3) the elevator system in respect to past, present and anticipated trends in elevator location, technology, costs, land use

regulations, servicing requirements and the period of time required for making adjustments to grain handling facilities;

4) economic development opportunities in terms of agricultural processing, manufacturing and natural resource development;

5) railway network planning, the impact upon locomotive and equipment requirements of railway operation under various network configurations, such as track improvements, joint running rights, line ownership transfers, construction of spurs and connecting lines and reciprocal routing agreements;

6) overall impact upon the regional and national economies of making changes to railway network configurations with specific reference to financial implications and any changes in cost allocation between the parties concerned;

7) the need to ensure a consistent and objective approach taking one region with another.

In developing the areas of investigations, there will be close consultation with the Snavely Commission and work will be carried out in such a manner as to ensure the exchange of relevant data.

d) Recommendation Function

Following the conclusion of each regional inquiry, the Commission will submit a report and recommendations to the Minister of Transport and the Minister Responsible For The Canadian Wheat Board. These will permit lines or portions thereof to be placed in one of the following categories:

1) Reallocation of certain lines to the basic network for protection until the year 2000;

2) Retention of certain lines for a period to be determined to permit the realization of anticipated developments;

3) Retention for a period to be determined to facilitate regional adjustment and to permit completion of related infrastructure programs;

4) Incorporation of certain lines or portions thereof in a more rational network structure;

5) Removal of abandonment prohibition from certain lines at a date to be determined subject to the provisions of Section 254 of the Railway Act.

Without limiting the generality of the foregoing, the Commission may make supplementary recommendations which could relate to:

1) The physical condition of railway plant and equipment;

2) The status of railway right of way after abandonment;

3) Highway and road programs;

4) The planning priorities of the grain handling industry;

5) Car allocation;

6) The composition of the basic network as initially defined;

7) Construction of new linkages and interconnections to permit a more rational network structure;

8) Other matters which could relate to other matters relevant to the Inquiry.

B. THE INQUIRY PROCESS

1) Organization

The Commission established its headquarters at Saskatoon, with Regional Offices at Medicine Hat, Saskatoon, Regina and Brandon.

Hon. Emmett M. Hall, C.C., Q.C. .... Chief Commissioner
R. H. Cowan ..... Commissioner
R. Lehr ..... Commissioner
R. Forbes ..... Commissioner
L. Stewart ..... Commissioner
J.M. McDonough ..... Executive Director

Research

Dr. E. W. Tyrchniewicz ..... Director
W. Scott ..... Co-Ordinator
D. Neil ..... Research Assistant
T. Johnson ..... Research Assistant
V. C. LaRocque ..... Analyst

* Heather Campbell
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* E. deYong
* H. W. Horner
* Dr. S. N. Kulshreshtha
* Dr. J.A. MacMillan
* George McLaughlin
* Carol Nachtigall
* PMLP Consultants Ltd.
* R.L. Banks & Associates
* Dr. W. Winegard

Counsel

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---

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Inquiry Officers

R. Ferguson	Medicine Hat
S. Clark	Saskatoon
G. Thompson	Saskatoon
K. Setter	Regina
J. Lapka	Brandon

Information

V. Murray	Director

ii) Information Meetings, Public Hearings and Submissions

a) Information Meetings

To ensure a maximum degree of public awareness concerning the hearing process and to disseminate information to local groups and individuals, information meetings were conducted. These meetings, normally sponsored by a local community association, were held in rural communities on or closely adjacent to all Category "B" rail lines. The Commission's Inquiry Officers attended these meetings to explain the composition and powers of the Commission and to explain the procedures to be adopted for later public hearings. Inquiry Officers also used audio visual presentations to provide audiences with a background to the problems which led to the establishment of the Commission. The three prairie provincial governments contributed significantly to public participation in these meetings.

b) Public Hearings

Four types of public hearings were held, viz: Global

Hearings, Local Hearings, Regional Hearings and Final Public Hearings.

(1) Global Hearings:

Global hearings were held to enable the railway companies, the grain companies, the provincial governments, farm organizations, labour organizations, municipal government associations, and provincial or interprovincial groups to put forth their positions and recommendations for an improved transportation and grain handling system on the prairies. Hearings were originally scheduled for Saskatoon, Regina, Winnipeg, Edmonton and Calgary; however, with an overwhelming response from the public, the Commission extended the hearings to include two sessions at Saskatoon and Regina. The Global Hearings ran from October 15th to November 26th, 1975, lasting for 25 sitting days during which time 37 briefs were received.

(2) Local Hearings:

Local hearings were held at 77 centres across the three prairie provinces between January 5th and April 20th, 1976. The object of the local hearings in rural prairie communities was to provide local citizens and groups the opportunity to present briefs, to outline their concerns, views and aspirations to the Commission, and suggestions for improvements to the grain handling and transportation system. Hearings ranged from one to

three days with the Commission sitting a total of 90 days and hearing a total of 1,180 submissions. Local hearings were conducted with at least two Commissioners in attendance at the following places:

Waskada	Oakburn	Rockglen
Waldheim	Cremona	Vauxhall
Reston	Wishart	Glentworth
St. Walburg	Benalto	Arrowwood
Kenton	Lake Lenore	Kipling
Lloydminster	Drumheller	Schuler
Hamiota	Hanna	Pilot Mound
Blaine Lake	Wakaw	Fisher Branch
Medstead	Donalda	Empress
Radville	Big Valley	Arborg
St. Paul	Central Butte	Teulon
Bonnyville	Emerson	Iddesleigh
Smoky Lake	Biggar	Strathmore
Athabasca	Struan	Consort
Clyde	Carman	Kyle
Barrhead	Somerset	Dodsland
Golden Prairie	Kerrobert	Lucky Lake
Swift Current	Minto	Acadia Valley
Shamrock	Naicam	Eston
Mossbank	Neepawa	Kelvington
Dauphin	Portage	Jedburgh
Swan River	Assiniboia	Rhein
Norquay	Avonlea	Vegreville
Porcupine Plain	Alida	Lewvan
Zenon Park	Cardston	Stoughton

(3) Regional Hearings

Regional Hearings were held at 14 locations as follows across the prairies, with the full Commission in attendance:

Fairview, Alberta	Moose Jaw, Saskatchewan
Brandon, Manitoba	Liberty, Saskatchewan
Weyburn, Saskatchewan	Stettler, Alberta
Lewvan, Saskatchewan	Neepawa, Manitoba
Stoughton, Saskatchewan	Somerset, Manitoba
Stonewall, Manitoba	Yorkton, Saskatchewan
Gravelbourg, Saskatchewan	Melfort, Saskatchewan

During these hearings, the Commission sat for 27 days and heard 111 submissions. Regional Hearings were held to examine the transportation and grain handling systems of a specific area as a unit. Many of these hearings explored the feasibility of alternative rail configurations and the impact on the region and beyond. These hearings enabled the Commission and participants to examine the rationalization of railway lines on a broader scale and the impact on larger areas than was possible at local hearings.

(d) Final Hearings:

Major final hearings were held at Saskatoon, Edmonton, and Vancouver. Hearings ran from August 30th to September 15th, 1976, at Saskatoon where 41 submissions were presented. At Edmonton, nine submissions were made in the hearing which took place September 20th to 23rd, 1976. A hearing at Vancouver heard submissions from 30 groups during a five day sitting which took place between October 4th and 8th, 1976. The final hearing at Saskatoon was conducted to explore fully the concept of structuring and maintaining the most efficient system for transporting grain and other commodities in Western Canada as part of a rationalized railway configuration to serve the needs of the area to the year 2000. Final submissions were received from the railways, grain companies, provincial

governments, municipal associations, labour and farm organizations.

At Edmonton, the hearing dealt primarily with the Alberta Government proposal for a North West Alberta Railway Authority. The railways and other participants dealt specifically with the merits of this proposal. At Vancouver, the Commission received 30 submissions dealing with the transportation and handling of grain and other commodities at and through the West Coast Ports.

CHAPTER 2

THE FIRST CENTURY

THE FIRST CENTURY

An historical examination of grain handling and transportation in Canada reveals that this segment of Canadian agriculture has always been a "current" problem. The persistent issues can be categorized into two broad groups: organization of the grain handling and transportation system and freight rates. Also, this segment of Canadian agriculture has been a favorite subject for Royal Commissions or Special Inquiries. Starting with the 1899 Senkler Royal Commission on the Shipment and Transportation of Grain, and up through the current "Snavely" Commission on the Costs of Transporting Grain by Rail and this Commission, there have been 12 major federal Royal Commissions, or inquiries, into the grain industry and grain transportation problems in Canada.

There is a popular tendency to suggest that no progress has been made in the resolution of these issues and that all of these Royal Commissions, and inquiries, have been for naught. In reality, however, as will appear later, there have been significant changes in the grain handling system, but on the transportation side, little change has taken place. Much of the rail network on the Prairies was built 50 to 75 years ago, and, other than the main lines, it has suffered severe deterioration and neglect.

Freight rates on grain established in 1897 have for the most part not been changed since. With the exception of the post war dieselization program of the railways, the recent injection of government

purchased hopper cars, there has been little capital expenditure for the modernization of grain transportation equipment and facilities.

Many recommendations brought forward by Royal Commissions have been adopted by the Federal Government. A notable example is the MacPherson Commission of 1961 which recommended a shift in basic philosophy of transportation policy from one of a high degree of regulation and demand oriented rate making to a policy of deregulation with competition within and among modes as a major "regulator" of rates. A related recommendation was the "user pay" concept under which the user of transportation services was expected to pay the cost of resources used in providing the service; if the user was unable to pay this cost and the service was deemed necessary to the "public interest", the government should then step in and provide any necessary subsidy. This basic philosophy was incorporated in the 1967 National Transportation Act which set out in Section 3 the National Transportation Policy as follows:*

> "3. It is hereby declared that an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada, and that these objectives are most likely to be achieved when all modes of transport are able to compete under conditions ensuring that having due regard to national policy

---

* Bill C-33 now before Parliament repeals section 3 and substitutes a new section 3 making substantial changes in the old section 3.

and to legal and constitutional requirements

(a) regulation of all modes of transport will not be of such a nature as to restrict the ability of any mode of transport to compete freely with any other modes of transport;

(b) each mode of transport, so far as practicable, bears a fair proportion of the real costs of the resources, facilities and services provided that mode of transport at public expense;

(c) each mode of transport, so far as practicable, receives compensation for the resources, facilities and services that it is required to provide as an imposed public duty; and

(d) each mode of transport, so far as practicable, carries traffic to or from any point in Canada under tolls and conditions that do not constitute

(i) an unfair disadvantage in respect of any such traffic beyond that disadvantage inherent in the location or volume of the traffic, the scale of operation connected therewith or the type of traffic or service involved, or

(ii) an undue obstacle to the interchange of commodities between points in Canada or unreasonable discouragement to the development of primary or secondary industries or to export trade in or from any region of Canada or to the movement of commodities through Canadian ports;

and this Act is enacted in accordance with and for the attainment of so much of these objectives as fall within the purview of subject-matters under the jurisdiction of Parliament relating to transportation. 1966-67, c. 69, s.1."

Canadian Transport Commission

The National Transportation Act established the Canadian Transport Commission as the regulatory body to implement the changes thus contemplated. A discussion of the successes and failures of the Canadian Transport Commission would be most fascinating, however, that would be

outside the scope of this Commission. It may, however, be said that public opinion in the Prairie Provinces, as expressed at Commission hearings, holds that the Canadian Transport Commission did not fulfill its proper role in regulating CP Rail and Canadian National Railway insofar as maintenance of branch lines in Western Canada is concerned, and in the administration of the subsidies made available for the proper maintenance of these branch lines. The failure to compel the Railways to carry out repairs to bridges and trestles, as they were required to do by the Railway Act was stressed. The CP Rail bridge at Clearwater, Manitoba, and bridges on the CP Rail Alida, Lyleton and Colonsay subdivisions were specific examples brought to the Commission's attention.

A prime example of Canadian Transport Commission indecision and procrastination relates to its discussion with CP Rail relative to the bridge at Clearwater on the Napinka subdivision. This bridge was judged by CP Rail in 1968 to be "unsafe" following high water in the spring of that year. CP Rail have serviced the points on its subdivision from each end of the subdivision since that time.

In 1975, the Napinka subdivision was made a part of the basic network and pursuant to the Prohibition Order #5, abandonment of this subdivision is prohibited before January 1, 2000. On November 26, 1975, the Canadian Transport Commission interpreted the prohibition order as an order to restore operations. At the same time, the Canadian Transport Commission required information on how CP Rail was servicing the line. On March 2, 1976, the Canadian Transport Commission informed CP Rail that they were "assessing the situation". The decision regarding the bridge is therefore in abeyance and the bridge remains out of service.

The Commission views with concern the action of the railway to render service in keeping with the convenience of the carrier rather than service as required by the public and in keeping with the intent of the laws of the land.

There were also complaints that the Canadian Transport Commission indulged in indecision and delays in respect of approval for CP Rail double tracking improvements in the mountain region. Another complaint was about the delay in having the railways abandon the Edmonton-Calgary cross-haul operation. But perhaps the dominant criticism was that the Canadian Transport Commission, being Ottawa based, was unaware of and was not responsive to Western problems and needs.

An Overview

The objective of this chapter is to provide an overview, or setting, for the report. Part I provides an historical perspective of the Prairie grain handling and transportation situation including a sketch of railway construction in Western Canada, establishment of the Crows Nest Pass grain rates, and the evolution of the grain handling system. Part II reviews the work of previous Commissions of Inquiry, specifically the Duff, Turgeon and MacPherson Commissions. Part III describes the present situation, since the MacPherson Report and up to the establishment of this Commission. The chapter concluded with Part IV which is an overview of future transportation requirements, especially for grain, coal, forest and other bulk commodities.

I. HISTORICAL PERSPECTIVE OF THE PRAIRIE GRAIN HANDLING AND TRANSPORTATION SYSTEM

To understand the problems and alternatives being faced by the grain handling and transportation system today, it is necessary to have some understanding of the conditions under which our railways came into being, and how the grain handling system has evolved.

Railway Construction

The Canadian Pacific Railway was conceived in the early years of Confederation, as an instrument for unifying the country. Canada then consisted of New Brunswick, Nova Scotia, Quebec, Ontario and part of Manitoba. Two years later, the Government bought from the Hudson Bay Company the vast and relatively unknown area of the Northwest Territories, the part of Canada that was later to become the present day provinces of Manitoba, Saskatchewan, Alberta, and the Territories.

In 1870, the Prime Minister, Sir John A. Macdonald, for the purpose of securing British Columbia's entry into Confederation, promised a transcontinental railway. Canada, at that time, was not yet four years old, with a population of only three and a half million of which there were about 2,500 across the whole of the Northwest Territories; and here was the Prime Minister promising to construct the greatest of all railways, longer than any line yet built, and almost one thousand miles longer than the first trans-continental railroad - the Union Pacific-Central Pacific - which

the United States, with a population of almost 40 million, had only just managed to complete in 1869. That line was far to the south of the 49th parallel. A second transcontinental line, the Northern Pacific, lying well within 200 miles of the Canadian Boundary was projected, and construction commenced. A transcontinental railway wholly within Canada came to be regarded as indispensable in the National interest.

It was to take fifteen years to build the railway to the Pacific, and in the process did much to fill up the empty spaces on the western plains with settlers and the beginnings of settlements, and joined together the vast land from sea to sea.

After building the Canadian Pacific Railway main line to the Pacific, branch lines were extended quickly in the west to develop traffic for the main line. The territory south of the main line in Manitoba, for example, was adapted to railway construction and settlement, and was quickly consolidated. More extensive lines were run out from Regina, through Saskatoon, to Prince Alberta in 1890; from Calgary to Edmonton in 1891 and from Calgary south to Fort MacLeod in 1892. In the early 1900's, to take advantage of the boom period, lines were rapidly extended north and south of the main line on the prairies.

Canadian transportation policy began to change somewhat, with the completion of the Canadian Pacific Railway line to the Pacific. The change was signalled, in 1888, by the suspension of the monopoly given to the company just seven years earlier, and seems to have been

caused by fears that the rapidly growing Canadian Pacific Railway would not serve the public interest.

The change in policy blossomed into outright regulation when, in 1897, the government insisted on certain rate reductions in response to the Canadian Pacific Railway's request for aid in the construction of the Crows Nest Line. This was the Crows Nest Pass Agreement which reduced freight rates on wheat bound for export through the Lakehead, and on a number of types of westbound freight. The policy of regulation was formalized in 1904 when the Board of Railway Commissioners, now the Canadian Transport Commission, was formed.

The next decade and a half saw a continuation of the policy of encouraging the expansion of rail lines on the one hand, and of regulation on the other. Two new transcontinental railway systems - The Grand Trunk-Grand Trunk Pacific, and the Canadian Northern - were undertaken by private interests with substantial assistance from the Dominion Government.

In 1896, the Canadian Northern Railway was formed, when it acquired a charter granted, in 1889, to the Lake Manitoba Railway and Canal Company, for the construction of a 123 mile line from Gladstone, through Dauphin, to Winnipegosis. Subsequently, through leasing, absorption and new construction, the Canadian Northern had a network of railways connecting and radiating from such centres as Edmonton, Calgary, Moose Jaw, Regina, Saskatoon, North Battleford and Prince Albert. In 1902, the company obtained authority to build a railway from Port Arthur to Montreal. In 1915 the last spike

was driven in the Canadian Northern's transcontinental network. However, the line had been largely sponsored by government, which provided funds by guaranteeing bonds, and both in 1915 and 1916 further government assistance was needed to keep the line afloat.

In 1902, the Grand Trunk Railway sought assistance to develop a transcontinental system. The government eventually agreed to build this from Moncton to Winnipeg and lease it to the Grand Trunk Railway, which would construct the line, known as the Grand Trunk Pacific, from Winnipeg to the Pacific Coast, through Edmonton and Yellowhead Pass, guaranteed by the Dominion Government.

By 1916, these two new transcontinental railways were in serious trouble, and it was realized that the prairie rail system was over-built. This set the stage for the first of several twentieth century Royal Commissions to study Canada's railways.

The Commission, known as Drayton-Acworth, recommended that the Dominion Government take control of the Grand Trunk, Grand Trunk Pacific and Canadian Northern, that ownership of the companies pass to a board of trustees of "The Dominion Railway Company", that three government-owned railways, the Intercolonial, the Prince Edward Island and the Transcontinental, be handed over to the Company; that the Government assume responsibility for the interest on existing securities, and that the board be permanent and self-perpetuating in order to isolate it from politics.

These recommendations were accepted, and in 1919, with the passage of the Canadian National Railways Act, there came into

being what we know todays as Canada's second national railway company. The formation of the Canadian National Railway effectively killed any chance of the Canadian Pacific Railway having the monopoly it desired, while at the same time, preserved competition with the privately owned company.

The Canadian National Railway came into being carrying a massive financial burden. By 1935, the company was labouring under $1,255 million in bonded indebtedness, and $1,771 million of inherited debt. Unlike the American system where unsuccessful companies were allowed to go into bankruptcy while the physical properties remained without the encumbrance of old and unpaid debts, in Canada the sins of the father were visited upon the child, and the Canadian National Railway was forced to shoulder the debts for which it was not, per se, responsible and which it could never hope to repay. Although some adjustments have been made, Canadian National Railways still carries a long term debt of $2 billion.

Because the Canadian National Railway was the property of the Canadian people, it was expected to be more responsible than other transportation concerns for the general welfare of the communities it served. As early as 1923, the company was committed to development work, such as immigration and land settlement, from which no immediate financial rewards would accrue and the ultimate benefits of which would help Canada as a whole.

The real struggle, however, was for revenues. By 1928, this had largely localized in the rich agricultural areas of the northwest.

In determining which of the two railways was to blame for branch line duplications, it is essential to bear in mind that the Canadian National Railway had received, as a legacy from the Grand Trunk Pacific and the Canadian Northern, "settlers rights" in the wheat bearing districts of northern Saskatchewan and in the Peace River in Northern Alberta. The territory of the Canadian Pacific Railway lay to the south, and it was only when the northern lands began to produce and bring prosperity to those areas that Canadian Pacific Railways decided seriously to penetrate into a region which was traditionally the property of its rival. A long battle between the two railways resulted in 1929 in the acquisition from the Alberta Government of its northern railway property by both systems, which agreed upon joint operations under the name of Northern Alberta Railway. But elsewhere there was the minimum of co-operation.

On March 29th, 1929, the Hudson Bay road was completed and ultimately, in 1956, given to the Canadian National Railway. No provision was made to carry grain traffic originating on Canadian Pacific lines despite the existence of physical interchanges between the two railways in northeast Saskatchewan.

The economic crisis of 1929 and the ensuing depression brought on the Duff Commission in 1931; which was appointed to:

> "... inquire into the sole problem of transportation in Canada, particularly in relation to railways, shipping, and communication facilities therein, having regard to present conditions and the probable future developments of the country..."

While the Commission recognized several roots to the problem, including the depression, competition from highways and the financial burden of the Canadian National Railways, much of the blame was laid on unwarranted competitive expansion by the two rail systems. The Commission did not see a monopoly as being the solution to this problem. Instead, closer regulation of the industry was recommended for its own as well as public interest, as follows:

1) "That the Board of Directors of the Canadian National Railway be replaced by a Board of Trustees very similar to that outlined by the previous Commission.

2) "That steps be taken to see that the two railways co-operate as much as possible, and that an 'arbitral tribunal' be established to encourage co-operation between the railways."

The Canadian National-Canadian Pacific Act of 1933, the outcome of the 1931 Commission, was designed to stop wasteful competition. It enjoined the railways to enter co-operative agreements, but stopped short of complete amalgamation.

By 1935, the railway mileage had reached a total of 19,285 as shown hereunder:

TABLE II-1

Rail Miles of Track 1906-1935

Year	Manitoba	Saskatchewan	Alberta	Total
1906	2,774	1,957	1,235	5,966
1910	3,221	2,932	1,488	7,641
1915	4,498	5,327	3,174	12,999
1920	4,404	6,220	4,474	15,098
1925	4,539	7,056	4,965	16,560
1930	4,410	8,175	5,607	18,192
1935	4,970	8,555	5,760	19,285

In 1965, the Province of Alberta undertook the construction of a line called the Alberta Resources Railway from Hinton, Alberta to Grande Prairie in the Peace River Block. Management and operation of the line was contracted to Canadian National Railways, which commenced operation in 1970.

While this construction was taking place, some abandonments were being made as follows:

TABLE II-2
Branch Line Abandonments
1945 - 1963

Year	Subdivision	From -- To	Mileage
CANADIAN NATIONAL			
1950	Spondin	Spondin - Hemaruka, Alberta	24.0
1952	Lampman	Goodwater - Blewett, Saskatchewan	22.0
1960	Wakapa	Neelin - Deloraine, Manitoba	62.0
	Oakland	Amaranth - Alonsa, Manitoba	18.0
1963	Central Butte	Grainland - Dunblane, Saskatchewan	25.0
	Victoria Beach	Beaconia - Victoria Beach, Manitoba	23.0
Total Canadian National			183.0
CP RAIL			
1952	Lorraine	Bulwark - Berkinshaw, Alberta	17.2
	Youngstown	Coronation - Youngstown, Alberta	39.5
1954	Whitkow	Redfield - Ravenhead, Saskatchewan	12.2
1960	Reston	Reston, Man. - Wolseley, Sask.	122.2
	Neptune	Tribune - Neptune, Saskatchewan	14.1
1961	McAuley	Kirkella - McAuley, Manitoba	16.8
1962	Snowflake	Snowflake - Windygates, Manitoba	16.2
	Fallison	Snowflake - Fallison, Manitoba	10.1
	Kaleida	Rudyard - Kaleida, Manitoba	16.2
	Lac Du Bonnet	Great Falls - Lac du Bonnet, Manitoba	14.6
	Rosetown	Gunnworth - Rosetown, Saskatchewan	16.9
	Lorraine	Coronation - Bulwark, Alberta	11.5
1963	Rapid City	Rapid City - Minnedosa, Manitoba	13.5
Total CP Rail			311.0
TOTAL ABANDONMENTS 1945 - 1963			494.0

Construction of the Great Slave Lake Railway commenced in 1962 and regular operations began in 1969. The line was built by the Dominion government at a cost of $75 million with a contribution of $20 million from Consolidated Mining and Smelting Company, $15 million of which has been paid to date. The line was given to Canadian National Railways and is operated as an integral part of that system.

Other railway lines were built in Northern Manitoba between 1929 and 1968 to serve mines and industries. These lines were built from public funds and are now part of the Canadian National Railway system serving such centres as Thompson, Flin Flon and Lynn Lake.

Crows Nest Pass Grain Rates

Knowledge of the situation which existed in Western Canada prior to 1897 is necessary for understanding the rate structure for prairie grain and flour which ensued. Most of the development which had occurred in the West by the late 1880's, had been in Manitoba, then the centre of prairie grain production. Before 1883, however, there was no Canadian rail line connecting Manitoba to the East. Grain had to be shipped through St. Vincent, Minnesota, to the Great Lakes. This indirect shipping of grain was very costly.

In 1883, Canadian Pacific Railway completed its line from Winnipeg to Fort William/Port Arthur. It provided a more direct route to the East for grain producers. However, since Canadian Pacific Railway had the only rail line in the region, it was able to exercise a great deal of monopoly power and adopt a value-of-service pricing policy.

Freight rates were set just sufficiently below the rates through St. Vincent to divert the grain to the all-Canadian route. As a result, Canadian Pacific Railway's rates were higher than the actual costs justified.

Between 1886 and the mid-1890's, prairie farmers were able to exert enough pressure on Canadian Pacific Railway to reduce its rates. During this period, freight rates for grain were reduced from 28 cents to 17 cents per hundredweight from Winnipeg to the Lakehead; from 60 cents to 29 cents per hundredweight from Calgary to the Lakehead. By the mid-1890's, rates had decreased considerably although there were still groups which maintained that they were too high.

From a political standpoint, there had been continuing debate during this period, regarding freight rates in Western Canada. In 1897, the Liberals, under Laurier, had just ended their first year in power. The economy of the country was in stagnation, touching the bottom of one of the most severe recessions of that era. The export market was weak and international markets were depressed. Canada faced the loss of preferential status as a supplier of resources to England, and was having difficulty in penetrating the large American market.

Interest in south-eastern British Columbia was expanding. In the middle 1800's, the era was known to be rich in minerals. The production of gold, silver, lead and zinc in the 1880's made Nelson one of the largest towns west of Winnipeg. The transcontinental lines, however, ran north and south of the area. One of the two

United States' lines passing closest to the region, the Great Northern, reached Nelson by branch line in 1895. The penetration of this branch line into an area of Canada, particularly one with such potential, was viewed with alarm as an infringement on Canadian sovereignty.

As it was, the Province of British Columbia and Canadian Pacific Railway both wanted a railway line built into the Kootenays. In 1888, the Crows Nest and Kootenay Lake Railway Company (renamed the British Columbia Southern) was granted a charter to build within British Columbia from Crows Nest to the Kootenays. Canadian Pacific Railway, on the other hand, had been preparing for a line into the Kootenays by acquiring, in 1889, a charter which enabled the establishment of a connection by water and rail between the northern Canadian Pacific Railway line, which ran through Kicking Horse Pass, and the Kootenays, a roundabout and impractical route. In 1892, Canadian Pacific Railway, in anticipation, leased a line from Dunmore to Lethbridge, Alberta. The early 1890's found Canadian Pacific Railway in the process of bargaining with the Federal Government for a subsidy to build the line. Both the Liberals and Conservatives subscribed to the policy of railroad subsidization, but differed on the actual terms of the agreement. In any event, with the amount of government support, well over 50 percent of costs, and the expectation of profit, Canadian Pacific Railway would have been able to build the line with little, if any, of its own funds.

Political pressures in the form of anti-monopoly sentiment were strong among Westerners, and among many non-industrial Easterners,

in the years prior to 1897. Opposition was voiced against the restrictive tariff laws then in effect which, it was felt, maintained higher prices for the industrialists, at the expense of the rest of the nation. In addition, the West had opposed the monopoly power granted the Canadian Pacific Railway by the 1881 Canadian Pacific Railway Act. Despite the growing discontent over rates, the Canadian Pacific Railway increased the Western freight rates in 1883. Western opposition finally succeeded in forcing the Government, on April 18, 1888, to buy back the guarantee of the Company monopoly, thereby allowing the construction of competing provincial and private lines. In 1895, a Commission was appointed to investigate rates, but brought little satisfaction to the West. However, three objectives of the anti-monopolists were realized in 1897: tariff laws were relaxed in May; the Crows Nest Pass Agreement in June cancelled the Canadian Pacific Railway's freedom from Government rate control; and rates on certain important commodity movements were lowered.

The original Crows Nest Pass Agreement was basically a contract between the Government of Canada and Canadian Pacific Railway. It stipulated that, in return for a subsidy to help in the construction of a rail line into the mineral-rich Kootenay region of British Columbia, Canadian Pacific Railway would agree to make several concessions to the Government. The controversial Crows Nest Pass grain freight rates, one of these concessions, were initially only a part of the Agreement.

The cash subsidy from the Federal Government eventually amounted to more than $3.4 million. Canadian Pacific Railway also received 3,755,733 acres of land from the Government of British Columbia, including lumber and minerals. Of this land, Canadian Pacific Railway transferred 50 thousand acres of coal bearing land to the Dominion Government, under the provisions of Paragraph 15 of the Crows Nest Pass Agreement. In addition, freight rates for grain and flour moving from the West to the Lakehead were reduced in two stages by three cents per hundredweight. The effective rates on September 1, 1899, from Winnipeg became 14 cents per hundredweight; from Regina, 20 cents per hundredweight and from Calgary, 26 cents. While the rates for grain and flour were to be in effect in perpetuity, they were applied for only a little more than seven of the first twenty-six years of the Agreement, as shown in Table II-3.

In 1902 and 1903, Canadian Northern Railway made agreements with the Provincial Governments of Manitoba and Saskatchewan to reduce its rates on all commodities. In order to remain competitive, Canadian Pacific Railway had to reduce its rates below the Crows Nest levels. This continued until 1918. In the interim period, the Board of Railway Commissioners had been established with complete control over all rate levels, except those set by Parliament. In early 1918, both railways applied to the Board for general rate increases. These were granted, except for the rates on grain and flour, which were increased only to the Crows Nest rate level. Later in 1918, the Crows Nest Pass Agreement was suspended, under the

TABLE II-3

Rates on Grain to Fort William-Port Arthur From Selected Points
(In cents per 100 pounds: Crows Nest Pass Rates = 100 in index)

	From Winnipeg		From Regina		From Calgary	
	Cents	Index	Cents	Index	Cents	Index
Before August 1898	17	121.4	23	115.0	29	111.5
August 1, 1898 - August 31, 1899	15½	110.7	21½	107.5	27½	105.8
September 1, 1899 - October 6, 1903	14	100.0	20	100.0	26	100.0
October 7, 1903 - May 31, 1918	10	71.4	18	90.0	24	92.3
June 1, 1918 - August 11, 1918	12	85.7	20	100.0	26	100.0
August 12, 1918 - September 12, 1920	14	100.0	24	120.0	30	115.4
September 13, 1920 - December 31, 1920	19	135.7	32½	162.5	40½	155.8
January 1, 1921 - November 30, 1921	18	128.6	31	155.0	39	150.0
December 1, 1921 - July 5, 1922	17	121.4	29	145.0	36	138.5
July 6, 1922 to date	14	100.0	20	100.0	26	100.0

Source: Adapted from Index Numbers of Railway Freight Rates, 1913 - 1936 (Ottawa, 1938).

War Measures Act, in order to allow railways to increase their rates. This was done so that they would be able to increase the wages they paid their employees in order that threatened strike action could be averted.

For the next four years, freight rates were considerably above the Crows Nest levels. In 1922, however, the Crows Nest rates for grain and flour were restored, and in 1924 the full Crows Nest Pass Agreement came back into effect. Under a literal interpretation of the Agreement, the railway were compelled to apply these rates on only those lines which had been in existence at the time the contract was signed (1897). The rates being applied on newer lines were not subjected to the Agreement. In 1925, Parliament cancelled the Crows Nest Pass rates on all commodities other than grain and flour. Grain and flour rates were made statutory and were to apply to all points on all lines west of Fort William to Fort William. In 1927, the Board of Transport Commissioners made equivalent rates applicable to grain and flour moving to the Pacific Coast ports for export. This provision was extended to the Port of Churchill in 1931. Subsequent alterations to the statutory rates have been confined to extensions in the grain categories covered.

Section 271 of the Railway Act (Chapter R-2, R.S.) now reads as follows:

"... Crows Nest Pass rates

1) "Rates on grain and flour moving from any point on any line of railway west of Thunder Bay, over any line of railway now or hereafter constructed by any company that is subject to the jurisdiction of Parliament, shall be governed by the provisions of the agreement made pursuant to Chapter 5 of the Statutes of Canada, 1897.

"... Rates on grain and flour for export through West Coast ....

2) "Rates on grain and flour moving from any point on any line of railway west of Thunder Bay to Vancouver or Prince Rupert for export over any line of railway now or hereafter constructed by any company that is subject to the jurisdiction of Parliament shall be governed by the provisions of paragraph 2 of General Order No. 448 of the Board of Railway Commissioners for Canada dated Friday the 26th day of August 1927.

"... Rates on grain and flour for export through Churchill

3) "Rates on grain and flour moving for export from any point west of Thunder Bay or Armstrong to Churchill over any line of railway of any company that is subject to the jurisdiction of Parliament shall be maintained at the level of rates applying on the 31st day of December 1966.

"... Non application of Section 3

4) "Notwithstanding section 3, this section is not limited or in any manner affected by any Act of the Parliament of Canada, or by any agreement made or entered into pursuant thereto, whether general in application or special or relating only to any specific railway or railways.
1960-61, c.54, ss 1, 2; 1966-67, c."

Evolution of the Grain Handling System

By the turn of the century, grain production was the dominant business in Western Canada. In 1901, approximately 3.5 million acres had been planted to major crops. The Winnipeg Grain Exchange had been established in 1887, and in 1903, it opened a futures market. During this period, grain marketing took place largely through the Exchange. The primary elevator system had begun to develop, and in 1900, there were 454 elevators with a licensed capacity of 12.8 million bushels. In addition, there were numerous flat warehouses in existence, but few of these were built after 1900.

This period also saw the origin of the producer car concept, which still exists today. This privilege had its root in a dispute involving the owners of the earliest elevators, the owners of flat warehouses, and the railways. As country elevators began to make their appearance in Western Canada, the flat warehouses, which had been the original facilities to accumulate grain for loading to rail cars prior to that, became technically obsolescent. The elevator was a far superior facility to achieve expeditious turn-around of cars, and recognizing this, the railways agreed to supply cars only to the elevator and not to flat warehouses. Both warehousemen and producers protested this situation, with producers' primary concern being that the destruction of competition at these points would force them to deal with elevator syndicates.

The issue raged along with a number of controversies just prior to the turn of the century, and in 1899 the Federal Government appointed a Royal Commission to inquire into producers' complaints. The recommendations of the Royal Commission led to the passage of the Manitoba Grain Act in 1900 which made provision for regulation of the grain trade. In addition it included a clause prohibing the railways from refusing to provide service to flat warehouses.

Amendments to the Act in 1902 introduced the car order book. Persons wishing to ship grain were required to place an application in the car order book, maintained by the railway agent, and cars had to be distributed in order of application.

The provision of the legislation protecting producers' rights

to obtain cars was breached by Canadian Pacific Railway in 1902, and charges against the railway were laid in the well-known Sintaluta case. The case was carried to the Supreme Court of Canada. Canadian Pacific Railway lost, and a provision permitting producers to order their own car has lived on to this day, but is rarely used. The absence of railway agents at most points has made the order book requirements quite useless.

Country elevators at this time were operated by persons and companies engaged in grain merchandising. The Royal Commission of 1899 pointed out that a standard elevator of 25 thousand bushels would have to handle three times that quantity, at the then current handling tariff of 1.5 cents per bushel to be a profitable venture. Accordingly, the Commission went on to say, the elevator operator can only make a profit when he is also engaged in grain merchandising and "makes a buyers' profit on grain handled by himself in addition to the profit on storing and handling."

The first to engage in construction of elevators were the flour mills with the Ogilvie Milling Company constructing the first elevator in Canada at Gretna in 1881. The Northern Elevator Company was the first of the so-called "line" elevator companies to construct a chain of elevators to act as their own source of supply for grain merchandising.

The important features of the early development of the grain handling system was the close relationship between grain handling and grain merchandising. As producer owned elevator companies came

into existence they too followed this pattern.

The Grain Growers Grain Grain Company was formed in 1906 by a few determined members of an early producer organization - the Territorial Grain Growers Association. The concept of producers entering the grain merchandising business to offer competition to the line elevator companies, was first given effect by these individuals. The Grain Growers Grain Company originally had no physical facilities. However, producers' organizations had brought sufficient pressure on provincial governments for public ownership of elevators that in 1909, the Manitoba Government agreed to construct a chain of facilities. The Government eventually built or acquired 174 elevators, but financially the venture was a failure. Most of the elevators were first leased and eventually sold to the Grain Growers Grain Company. Thus the company acquired the facilities which it needed to put it on an equal footing with the line companies. The Grain Growers Grain Company became United Grain Growers in 1917, when it amalgamated with the Alberta Farmers Co-operative Elevator Company Limited. The situation remained more or less static until the formation of the Alberta Pool in 1923, and Manitoba and Saskatchewan Pools in 1924. The Saskatchewan Pool acquired the assets of Saskatchewan Co-operative Elevator Company. The Manitoba and Alberta Pools built their own facilities.

The story since 1938 has been one of amalgamation so that today there are 19 companies, eight of which are major, actively engaged in operating primary elevators in Western Canada. The history of

these amalgamations is as follows:

ORIGINAL COMPANY	NO. OF ELEVATORS	PURCHASED BY	YEAR
Anderson Grain Company	6	United Grain Growers	1938
Gillespie Grain	N/A	United Grain Growers	1943
Reliance Grain	110	United Grain Growers	1947
Midland and Pacific Grain Company	65	United Grain Growers	1954
Canadian Consolidated Grain Company	129	United Grain Growers	1959
Canadian West Grain	5	United Grain Growers	1961
McCabe Grain	72	United Grain Growers	1968
Reliance Grain	30	Pioneer Grain Company	1947
Western Grain	148	Pioneer Grain Company	1951
Independent Grain Company	29	Pioneer Grain Company	1953
Inter-Ocean Grain	26	Pioneer Grain Company	1972
National Grain	286	Cargill Grain Company	1974
Western Canada Flour Mills	41	Manitoba Pool Elevators	1940
Alberta Pacific and Federal	14	Manitoba Pool Elevators	1943
Reliance Grain Company	20	Manitoba Pool Elevators	1947
Northern Grain Company	29	Alberta Wheat Pool	N/A
Lake of the Woods	99	Manitoba, Saskatchewan and Alberta Pools	1959
Ogilvie Mills	56	Manitoba, Saskatchewan and Alberta Pools	1959
Federal Grain Company	1,092	Manitoba, Saskatchewan and Alberta Pools	1972
Robin Hood Elevator-Moose Jaw	1	Parrish and Heimbecker	1968
Quaker Oats Elevator-Saskatoon	1	Parrish and Heimbecker	1973
Ellison Milling Company	18	Parrish and Heimbecker	1975

-- The Federal Grain, Alberta Pacific and Searle Grain Companies amalgamated in 1967.

In 1976, a new producer organization entered the field, the Weyburn Inland Terminal Elevator Association, which constructed a one million bushel capacity elevator. Two similar facilities are being projected by groups of producers at Rockyford and Champion, Alberta. These plants and the new Cargill plants at Elm Creek and Rosetown are being referred to as Inland Terminals. They are not, in fact, terminals - but are large high-throughput primary elevators licensed as such by the Canadian Grain Commission and are capable of cleaning grain to export standards. The Weyburn plant has a storage capacity of 1.0 million bushels, Rosetown and Elm Creek were constructed with one-half million bushel capacity. "Future inland terminals will be smaller, as a result of rising capital costs" according to Mr. Roger Murray, President of Cargill Grain Company of Canada. He suggests that in the future, 300 thousand bushel capacity plants, including cleaning and loading capability, may become the norm.*

The larger units being constructed by the Manitoba Pool Elevators, Saskatchewan Wheat Pool and Alberta Wheat Pool are in the 140 thousand to 170 thousand bushel capacity range. Saskatchewan Wheat Pool recently opened a twin scale plant at Mossbank of 150 thousand bushel capacity, capable of cleaning 600 bushels per hour. United Grain Growers are now constructing a 370 thousand bushel plant at Dawson Creek, British Columbia.

Capital requirements for the next ten years of the primary

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* Roger Murray, President, Cargill Grain, Speech to Palliser Wheat Growers Annual Meeting, Saskatoon, January, 1977.

elevator industry are said to be in the neighbourhood of $500 million. In addition, an added cost has been imposed to convert to metric. It is said to cost $2,200 per elevator or $8.0 million for the system.

Origins of a Wheat Board

Suspension of the open market was effected in 1917 and the Board of Grain Supervisors was established to control distribution and the price of Canadian Wheat. This move was necessitated by the centralized buying on behalf of allied Governments which had effectively cornered the market. Prices had risen to unprecedented levels and remained well above $2.00 for the duration of World War I. By comparison, for the five year period from 1908/09 to 1913/14, prices averaged about $1.00 per bushel and ranged from about $0.80 to just over $1.20.

At the end of the war, the first Wheat Board was established to market the 1919/20 crop. Establishment of the Wheat Board followed, by only ten days, the disbanding of the Board of Grain Supervisors and the re-establishment of futures trading on the Winnipeg Grain Exchange on July 21, 1919.

The Wheat Board was established in response to the centralization and government control of buying which had developed in importing countries intent upon rebuilding their economies following the disruptive effects of the Great War. During 1919/20, when the Board was in existence, prices again ranged over $2.00, but in 1920/21 and 1921/22, an almost continuous price decline occurred, and wheat sold around

the $1.00 per bushel mark until the end of the 1923/24 crop year. The high prices of the 1917-20 period became associated with the existence of centralized selling, and farmer organizations pressed for the continuance of the Wheat Board. The Government, however, took a different view and the open market was re-established in 1920.

With the failure to secure the continuance of a Wheat Board, the various farm organizations turned to co-operative price pools. In 1923, the Alberta Co-operative Wheat Producers Ltd. was organized and began acceptaing deliveries. This was followed in 1924 by the formation of the Saskatchewan and Manitoba Pool organizations.

The Canadian Wheat Board

The emergence of the Canadian Wheat Board, and the strategies which attended its development have been among the most important influences on the grain handling and transportation system. The genesis of the Canadian Wheat Board can be traced to the formation of producer co-operatives. Producer dissatisfaction with the daily fluctuations inherent in the open market led to the organization of provincial co-operatives whose objective was to establish price pooling mechanisms. In 1924, these organizations formed the Canadian Co-operative Wheat Producers Limited as a Central Selling Agency, to market wheat delivered to the Pools. Part of the strategy employed by the Agency in price stabilization involved the purchase of wheat from producers in quantities which exceeded market requirements. This practice set a precedent as a mechanism for shielding producers from low prices at harvest time by separating the delivery of grain

(hence receipt of income) by producers from the daily selling price by an initial payment to be followed by a final payment at the end of the crop year. During the 1929-1930 period, this strategy led the Agency into overreaching its financial resources as large crops, combined with falling prices and limited world demand as a result of the 1929 collapse. By 1930, both the Provincial and Federal Governments had stepped in with financial guarantees to back the Agency's pooling arrangements.

By August 1, 1931, the Central Selling Agency closed its selling operations on behalf of the three provincial pools. Thereafter it was used as an agency of the Federal Government to support market prices, and to dispose of the pool carryover from the 1930 crop. Because of the support operations, the agency's holdings mounted from the unsold carryover of 76 million bushels at July 31, 1931 to 214 million bushels in 1935. The large sums of money involved and the demonstrated inability of producer co-operatives to assume financial risks of this magnitude induced the Bennett Government to reconsider its involvement in grain marketing. The result was the passage of the Canadian Wheat Board Act on July 5th, 1935.

While, from the Government's point of view, one of the primary tasks of the Canadian Wheat Board was to dispose of the holdings of the Canadian Co-operative Wheat Producers, there can be no doubt that the legislation encompassed broader objectives:

1) "to give producers some income protection through the establishment of a government guaranteed floor price for wheat;

2) "to give producers the opportunity to obtain equal prices for their wheat regardless of when they marketed it -- i.e. the opportunity for price pooling."

There was a strong feeling among producers and their organizations, that a Board Marketing System would give Canada a greater lever over world prices by controlling a large part of world wheat supply.

The Canadian Wheat Board's responsibilities and the scope of its activities grew steadily from its inception. By 1945, the marketing functions, which previously rested with the elevator companies, were transferred to the Board. The elevator companies became handling and warehousing operations with revenues accruing on a fee-for-service basis. These developments were viewed with mixed reactions with the co-operatives fully supporting the role of the Canadian Wheat Board and the private trade opposing.

The Elevator System

Post war developments in the grain handling system will be discussed in more detail in the chapter relating to the primary elevator system. However, it should be noted that significant changes have been taking place in the elevator system over the last 50 years. The peak number of elevators - 5,758 - was reached in 1935, when the total system had a capacity of 189.9 million bushels. Today, almost fifty years later, we have 3,964 elevators with a total capacity of 344 million bushels - 31 percent reduction in elevator numbers, but a 78 percent increase in handling capacity.

Peak handling period was in 1971/72 when over one billion bushels of grain moved through 4,383 elevators.

As with the development of the primary elevator system, most of the terminal facilities situated at Thunder Bay, Vancouver, Victoria, Prince Rupert and Churchill were constructed by 1935. The first terminal elevators were built in 1882 at Thunder Bay by Canadian Pacific Railway. By 1903, there were five terminals, all built by either Canadian Pacific Railway or Canadian Northern Railway. They had a storage capacity of 12 million bushels. From 1905 to 1920, with the development of large private and co-operative country elevator companies, many more terminal elevators were constructed. The terminal elevator at Prince Rupert constructed in 1925 now has a capacity of 2.25 million bushels. The terminal elevator at Churchill constructed in 1931 now has a capacity of five million bushels. The first two terminals at Vancouver were built by the Federal Government from 1916 to 1928. The total capacity at Thunder Bay, Churchill, Prince Rupert and Vancouver in 1935 was 118.2 million bushels; in 1976 it was only 122.2 million bushels. West Coast terminal capacity is being expanded through the Canadian Wheat Board incentive program designed to encourage the construction of additional storage of 11 million bushels at Vancouver and three million at Prince Rupert. The Burrard terminal in Vancouver is being rebuilt on the north shore of Burrard Inlet, a location served only by Canadian National Railway but accessible also by British Columbia Railway.

II. PREVIOUS COMMISSIONS OF INQUIRY

Inquiry commissions have played an important role in the transportation policy throughout Canadian history. Commissions have been appointed during each major crisis in the railway industry, its imminent bankruptcy in 1916, severe losses in 1931, rapid rate increases and alleged discrimination and proposed abandonment of branch lines in 1959.

The report of each Commission has marked a turning point in Canadian transportation policy. Prior to 1917, the policy was one of development. Railways were given generous help to get started, but were then left to fend for themselves with a minimum of regulation. The Drayton-Acworth Commission of 1917 marked the start of a period of much more direct involvement of government in the operation of railways. It also marked an increase in regulation. The Duff Commission of 1931/32 resulted in even stricter regulation, and the first attempt to reduce wasteful competition between the railways. The Turgeon Commission of 1948-51 was the first Commission to recommend subsidization. This subsidization was not intended to alleviate any problems of the railways but was based on the policy of reducing regional freight differences. Finally, the MacPherson Commission of 1959-61 marked the first break in the trend toward ever tightening regulation. It also accelerated the increase in subsidization, in this case to reduce the losses claimed by the railways.

Competition has played a very interesting part in the history

of the Canadian transportation system. Competition caused the problems associated with over-expansion in the period 1903 to 1915,and again in the period 1923 to 1929. Despite this, the concepts of a regulated monopoly or a crown corporation were discarded, in order to preserve competition, by both the 1916 and 1931 Commissions. Ironically, the railways never faced effective freight price competition, to any extent, until the post 1950 period, when highway, water, and to some extent air carriers became real alternatives to the railways. By this time the railways were so strictly regulated that they were, to some degree, in an inferior position relative to their competitors.

MacPherson Commission

The major force affecting the railway industry in the 1950's was the ever increasing intermodal competition. This competition came largely from trucks but air transport and water transport (on the improved St. Lawrence system) were also very important. The problem that resulted from this competition was slightly different from the problems of the past.

The Turgeon Commission had been appointed to study the freight rate situation. One of the issues was whether horizontal price increases were equitable. The Commission rejected the concept and urged the railways and Board of Transport Commissioners to make future adjustments more equitably. This advice seems to have been ignored however. Between 1948 and 1961, horizontal rate increases of 157 percent were approved (excluding statutory rates). Ironically, the competitive

environment, in which the railways were now operating, would not allow such increases to be fully implemented. Of the 157 percent increase possible, only an average of 55 percent was introduced. The problem, however, was not the level of increases but the distribution of the increases. The railways, facing competition in only some commodities, and in some regions, were forced to make the most of their rate increases in the remaining commodities, and in the remaining regions. As rates increased, competition increased, and the railways were forced to "...apply larger and larger increases to a smaller and smaller portion of traffic."* Unfortunately, the Prairies and Maritimes not only missed out on the benefits of competition, but in fact were penalized because of it.

In addition to the problems caused by the increasing competition from other modes were those caused by a century of viewing the railways as a tool of national policy.

It was the recognition of these problems which prompted the appointment of the MacPherson Commission. The Terms of Reference were simply:

> "to inquire into and report upon the problems relating to railway transportation in Canada and the possibility of removing or alleviating inequities in the freight rate structure."**

The Commission identified increased competition coupled with very strict regulation as the problems besetting the railway industry

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* Canada, Royal Commission on Transportation, 1961, p. 7.

** Ibid., p. ii.

of 1960. It was the first to suggest that over-regulation of the industry might not be in the public interest. It recognized that if a commercial enterprise is required by regulation to act in the public interest, responsibility for hardships created by this regulation must be accepted by the nation. The Commissioners state, "... let us reiterate, for those obligations which involve losses imposed upon railways by law, there is an obligation to assist."*

Based on this general principle, the Commission recommended that:

1) "The railways be allowed to remove uneconomic passenger service unless the Board feels that no alternative highway exists;

2) "Uneconomic branch lines be abandoned over some transitional period (possibly 15 years);

3) "$13 million be made available each year to compensate the railways for losses actually incurred in the operation of lines which the railways are prepared to abandon, but which shall be continued over the transitional period;

4) "the government make an annual payment to each railway company equal to the amount by which variable expenses incurred in the movement of grain and grain products exceed revenues arising from this traffic;

5) "the government make an annual payment of $9 million to the C.P.R. and $7.3 million to the C.N.R. to cover export grain's share of overhead costs;

6) "the Maritimes Freight Rates Act be extended to allow subsidized rates for all carriers;

7) "the 'bridge' subsidy be abolished;

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* Ibid., p. 22.

8) "feed freight assistance be made available to all carriers and that it be re-evaluated;

9) "the practice of horizontal price increases be abolished and be replaced by a more equitable form of price increase mechanism;

10) "the C.N. - C.P. Act be repealed;

11) "a Transportation Advisory Council be created; and

12) "efforts be made to develop better transportation statistics and that studies of the industry be conducted and published periodically."

Despite the sweeping recommendations made by this Commission, it is evident that they considered it their primary task to develop a comprehensive and consistent national transportation policy. This objective seemed logical because of their belief that:

1) "the developmental policy of the past was now obsolete;

2) "the virtual monopoly that the railways had enjoyed since very early in their history had been replaced by significant intermodal competition; and

3) "strict regulation no longer ensured either optimal resource allocation or equity."

While the MacPherson Commission reported in 1961, the legislation based upon it - The National Transportation Act - was not passed until 1966, and many of its provisions were not in force until 1967 or 1968.

III. THE SITUATION SINCE MACPHERSON

A complicating factor in the evolution of the Prairie Grain Handling and Transportation System has been uncertainty on the part of the railways and the grain companies. The main cause of this

uncertainty was the apparent unwillingness of the Federal Government to follow through on policies and procedures which it had implemented. As indicated earlier, the MacPherson Commission recommended in 1961 that branch line abandonment be allowed; that subsidies be paid to the railways to cover losses on branch lines retained "in the public interest". However, nothing much happened until 1965 when the Federal Government issued a prohibition order protecting all but 1,839 miles of prairie branch lines from abandonment until January 1, 1975. MacPherson's recommendations were incorporated into the National Transportation Act of 1967. The Canadian Transport Commission was provided with detailed procedures for the assessment of branch line abandonment applications and the payment of subsidies. (Railway Act Sections 252 to 259). A rail costing order, R-6313, developed by the Canadian Transport Commission and appealed by CP Rail, was eventually upheld by the Supreme Court of Canada. This costing order has been the basis under which so called branch line subsidies were paid. It failed in its objective. Grain dependent lines were allowed to deteriorate in condition and service. The subsidy was originally intended for the maintenance of branch lines. In reality it became a subsidy on grain on all the 19 thousand miles of railway lines in Western Canada and not just for grain that originated on the 12,000 miles of subsidized lines.

Due to the delay in the passing of the National Transportation Act subsidies had grown to $110 million by 1967. The National Transportation Act provided for a seven year phase out plan of the 'general subsidies'. The subsidies were to begin with the $110 million in 1967 and decline

by $14 million a year until a final payment of $12 million in 1974. These general subsidies, as they declined, were to be replaced by 'specific subsidies'.

Under Section 252 of the Railway Act, the specific subsidies on branch lines were to cover:

> "actual loss" in relation to any branch line which the Railway Companies proposed for abandonment under Section 253-254, or which, under Section 258, it was precluded from applying for abandonment".

Section 252 of The Railway Act reads:

> "In this section and sections 253 to 258 'actual loss' in relation to any branch line means the excess of
>
> a) "the costs incurred by the company in any financial year thereof in the operation of the line and in the movement of traffic originating or terminating on the line, over,
>
> b) "the revenues of the company for that year from the operation of the line and from the movement of traffic originating or terminating on the line;
>
> 'branch line' means a line of railway in Canada of a railway company that is subject to the jurisdiction of Parliament that, relative to a main line within the company's railway system in Canada of which it forms a part, is a subsidiary, secondary, local or feeder line of railway, and includes a part of any such subsidiary, secondary, local or feeder line or railway." 1966-67, c. 69, s. 42.

Section 258 of the Railway Act reads:

> 1) "Notwithstanding anything in section 252 to 257, the Governor in Council may, from time to time, by order,
>
> a) "designate branch lines that shall not be abandoned within such periods as the Governor in Council may prescribe; and

b) "designate areas within which branch lines shall not be abandoned within such periods as the Governor in Council may prescribe;

"and branch lines so designated or within areas so designated shall not be approved for abandonment within the prescribed periods nor shall an application for abandonment of any such line be made to the Commission within the prescribed period.

2) "Where a branch line or any segment thereof is being operated after the 22nd day of March, 1967 at an actual loss and the company operating that line or segment thereof is unable to make an application for abandonment under Section 253 by virtue of an order under subsection (1), the company may claim for such loss and the Minister of Finance, on the recommendation of the Commission and in accordance with such regulations as the Governor in Council may make in that regard, may, out of the Consolidated Revenue Fund, cause to be paid to the company an amount not exceeding the actual loss of the company, as determined by the Commission, attributable to the operation of that line or segment in the financial year of the company, or part thereof, for which the actual loss is claimed." 1966-67, c. 69, s. 42.

Specific subsidies were first paid to CP Rail in 1970, and to Canadian National Railway in 1971, and to Northern Alberta Railway from 1967. As indicated in the table below, the railways' claimed losses have risen steadily from $46.8 million in 1971 to $120.9 million in 1975. Subsidy payments to date have ranged from $32.7 million in 1971 to $82.5 million in 1975.

TABLE II-4

Railway Claimed Losses and Subsidy Payments
Under Sections 256 to 258 of the Railway Act (Freight)

Year	Miles of Track	Claimed Loss	Subsidy Payments to Dec. 31, 1976
1971	8,662	$ 46.8 million	$ 32.7 million
1972	11,212	56.1 million	37.8 million
1973	11,949	66.6 million	45.6 million
1974	11,498	103.7 million	75.5 million
1975	12,225	120.9 million	82.5 million

SOURCE: Railway Transport Committee, CTC, Ottawa

The inclusion of thousands of miles of so-called branch lines in the subsidy applications of Canadian National and CP Rail was never intended as a bona fide intention to abandon, which Section 258 (2) contemplated, but solely to qualify for the subsidy that would be payable under Sections 253 to 258 of The Railway Act, and included some four thousand miles of railway lines that have been protected to the year 2000.

In 1975 $47.7 million was paid to the railway companies, under the branch line subsidy program, to cover the costs of capital employed by the railways. Of this amount, $19.5 million was in respect of capital employed "off-line", that is, not in respect of the branch line. Details are shown in Table II-5.

TABLE II-5

Claimed "Category IV" Costs*

Branch Line Subsidy Claims 1975

	On-Line Costs	Off-Line Costs	Total
	..... $		
Canadian National	14,240,347	10,539,237	24,779,584
CP Rail	12,058,423	7,896,967	19,955,390
Northern Alberta Railways	1,919,100	1,047,740	2,966,840
TOTAL	28,217,870	19,483,944	47,701,814

* Cost of Capital for road property, diesel units, cars, etc.

SOURCE: Canadian Transport Commission 2/24/77

No part of this $47.7 million was spent by the railways on maintaining the lines for which the subsidy was paid. This is evidenced by the deplorable condition of thousands of miles of lines, even including some that were placed in the year 2000 category. It is clear that both the Canadian Transport Commission and the Railways considered the subsidy claimed and paid, not as a fund with which to keep the lines in proper repair, but as a commodity subsidy applicable towards the cost of transporting grain and grain products, to export positions. As a Canadian National Railway spokesman said, "We use it (the subsidy) as an essential part of our cash flow." Mr. Burbidge, President of CP Rail stated to the Commission in Regina on October 20, 1975: "The Branch Line Subsidy has become, in reality, a subsidy for moving grain."

The Years 1969 - 1977

In 1969, the Minister responsible for the Canadian Wheat Board established the Grains Group whose objective was to develop policies and arrangements to improve the efficiency of the gathering, transportation, and storage of Canadian grain to ensure its competitiveness in domestic and foreign markets. The Grains Group reports, made public in 1972, documented the problems in Prairie grain handling and transportation, and determined the costs of five alternative rationalization schemes. These reports were turned over to the Canada Grains Council for on going study and evaluation by all components of the industry, but no consensus for rationalization of the system emerged.

At the Western Economic Opportunities Conference at Calgary in 1973, the Federal Government announced that 1,839 miles of prairie branch lines, not previously protected, were "protected" from abandonment until January 1, 1975. In December, 1974, the Minister of Transport announced the Federal Government's designation of the Prairie Rail Network. Following consultation with the railways, a basic network of 12,413 miles of rail lines (64.6 percent of the total) was protected from abandonment until the year 2000. A further 525 miles of lines (2.7 percent of the total) which were no longer in use, were left unprotected and were referred to the Canadian Transport Commission for abandonment decision in 1975. It must be assumed that abandonment orders have been made by this date. The remaining 6,284 miles (32.7 percent of the total) were protected from abandonment for

at least one year to permit further evaluation by the inquiry process. This "freeze" has now been extended until June 30, 1977. In April, 1975, the Government announced the appointment of two Commissions of Inquiry:

1) The Commission on the Costs of Transporting Grain by Rail, which issued its first report in October 1976; and

2) the Grain Handling and Transportation Commission, whose essential task is to examine, on a regional basis, the economic and social aspects of railway branch lines, and more specifically, all aspects of the grain handling and transportation system in Western Canada, and to make recommendations regarding the future disposition of the 6,284 miles of line mentioned above.

IV. FUTURE TRANSPORTATION REQUIREMENTS

An important element in determining the best grain handling and transportation system for the Prairies is consideration of future transportation requirements for grain and other commodities. The projection of transportation requirements into the future requires insight and analysis into marketing factors influencing world demand for Canadian commodities and our capability to meet these demands. Such analyses are beyond the terms of reference of this Commission, and hence only existing projection studies are summarized. This section presents a brief overview of projected transportation requirements for grain, forest products, coal, potash, sulphur, minerals, and other agricultural products.

Grain

Projections of grain exports have been made to 1985 by the Canadian Wheat Board, Canada Grains Council, and the Saskatchewan Wheat Pool (See Table II-6). Projected available exports range from 690 million bushels to 1,480 million bushels. Average exports for the ten year period 1964-65 to 1973-74 were 566 million bushels, with a high of 798 million bushels in 1972-73.

TABLE II-6
Projected Grain Exports--1985

	Grain Available for Export	Movements through Pacific Ports
Canadian Wheat Board[1]	1,048-1,480 million bushels[2]	524-740 million bushels (50%)
Canada Grains Council[3]	690 million bushels[2]	310 million bushels (45%)
Saskatchewan Wheat Pool[4]	825 million bushels	412 million bushels (50%)

1 H. Bjarnason, "Future Volume and Direction of Western Canadian Grain Flow with Particular Attention to the West Coast Ports" presented to Canadian Co-operative Wheat Producers Seminar, Calgary, July 1976.

2 Bushels in Barley Equivalent

3 Supply and Demand Projections for Livestock and Feed Grains, Canada, 1985, Canada Grains Council, February 1976.

4 G. McGlaughlin, "Storage Requirements for Canadian Grain" presented to Canadian Co-operative Wheat Producers Seminar, Calgary, July 1976.

Forest Products

A joint Ministry of Transport and Canadian Transport Commission study has reported an uncertainty in Canada's future production projection for lumber due to the downturn in the North American economy. The world demand for wood pulp and newsprint is expected to remain relatively steady with the United States and Japan being the major importers. No changes are anticipated in transportation patterns other than in the Port of Vancouver. This will be dealt with later in the report.

Coal

World demand for both thermal and metallurgical coal will rise sharply in the next decade. British Columbia, Alberta and Saskatchewan are large coal producing provinces. Major new developments in the coal industry are presently on the horizon. Ontario Hydro, the largest single Canadian coal user projects that its needs will rise from 9.2 million tons in 1977 to 11.5 million in 1978, much of it from United States; but as United States supplies dwindle, Ontario Hydro will have to rely on Alberta coal to fill the void. Luscar Limited of Edmonton plans to move two million tons of thermal coal to Thunder Bay in 1978, and expectations are that by early 1980's, this may increase to four million tons and perhaps as high as six million. Canadian National Railways has called for tenders on a major order for cars and diesel locomotives to move Western coal to Ontario. These tenders were placed on behalf of Ontario Hydro. Canadian National

and CP Rail are in the process of entering into an agreement to move 45 million tons from Western Canada to Thunder Bay, during a 15 year period, starting in 1978. A terminal at Thunder Bay is in the course of construction. Coal will also be shipped by rail from Drumheller, Alberta, and Estevan, Saskatchewan in millions of tons. The coal resources in Saskatchewan, as given by the Province, are principally found in the Estevan Basin, estimated to contain one billion short tons; the Willowbunch Basin with almost three billion; the Wood Mountain Basin with one billion; the Cypress Basin with 700 million and the LaRonge Basin with an estimated 36 million. The future potential for the southern basins is 150 million tons to the year 2000, of this 100 million may have to be moved by rail. These movements of coal will tax the capacity of the main Canadian National and CP Rail lines making trans-provincial secondary main lines indispensable.

Potash, Sulphur and other Minerals

The volume of potash and sulphur moved to export markets is expected to increase in the future, imposing an added load on many rail lines. Increases in the movement of other minerals such as sodium sulphate, bentonite, nickel, uranium and others would compete with grain, lumber, potash and sulphur for the rail facilities and capacity available.

Products of Agriculture

Changes in policy, which will expand secondary agriculture

processing on the prairies, will create changes in the requirements for rail equipment from equipment designed for bulk commodity movement to specialized equipment such as refrigerator cars for meat product transport, or pneumatic cars for bulk flour or malt.

CHAPTER 3

THE PRODUCER AND HIS COMMUNITY

1. The Producer

2. Social and Community Implications of Railway Abandonment

1. THE PRODUCER

The producer is central to the whole grain handling and transportation process. There is no element in the food production-marketing chain which has changed more than the farm production unit. Each producer in his attempt to achieve his individual social and economic goals tries to adjust his production toward this end. In most cases he attempts to maximize his profits while at the same time keeping his risks and his values in mind.

The Farm Unit

Over the past 100 years, the change has been from a labour intensive, largely self-sufficient farm unit where each farm worker produced enough food for himself and three to five other people, to large scale capital intensive units where the farm worker produces enough for himself and fifty other persons. As the cost of farm labour increased and its availability decreased, farmers have very rapidly adopted improved production technology to maintain, and indeed to enhance their individual productive capacity. Naturally with this change in which labour has been replaced with capital in the form of technology, there have been great social repercussions in rural Western Canada. These have visibly manifested themselves in the decline in the farm population and in the number of community centres of service. This trend toward larger production units, although apparently not as marked since 1971 has proceeded at a very rapid rate as evidenced by the following figures.

TABLE III-1

Farm Size and Farmers -- Western Canada

Year	Alberta		Saskatchewan		Manitoba	
	No. of Farms	Average Size In Acres	No. of Farms	Average Size in Acres	No. of Farms	Average Size In Acres
1921	82,954	353	119,451	369	53,252	274
1931	97,408	400	136,472	408	54,199	279
1941	99,732	434	138,713	432	58,024	291
1951	84,315	527	112,018	550	52,383	338
1961	73,212	645	93,924	686	43,306	420
1971	62,702	790	76,970	845	34,981	543

Investment

As the nature of the farm changes from one on which labour was the limiting resource of productivity to one wherein capital is the limiting resource, the nature of the restraints and risks naturally change.

Average total investment in Saskatchewan farms in 1975 was estimated at $136,940.00*. As a comparison, a recent survey of 42 grain farms shows estimated total average investment of $240,264.00*. The following table shows the relationship of operators to total investment of the 42 farms by soil type:

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* Source - Farm Business Summary, 1975
Saskatchewan Agriculture

TABLE III-2

Soil Type	Total Investment		Operators Investment as Percentage of Total Investment	
	Under 1200 acres cult.	1200 & Over acres cult.	Under 1200 acres cult.	1200 & Over acres cult.
Brown	$160,999 (5 farms)	$371,843 (5 farms)	98	93
Dark Brown	$163,489 (8 farms)	$576,926 (5 farms)	77	52
	Under 900 acres cult.	900 & Over acres cult.	Under 900 acres cult.	900 & Over acres cult.
Black	$108,533 (14 farms)	$342,977 (5 farms)	30	52

The very high cost of production units require larger amounts of operating capital. In this environment of larger specialized farms, small profit margins can generate satisfactory farm incomes. At the same time, due to the size of the units, small loss margins can be disastrous. Although great strides have been taken toward the reduction of risks in farm production due to the vagaries of weather and the international market place, the vulnerability of the farmer to elements over which they have no control remains.

It is evident from the 77 local hearings attended by some 15 thousand producers that the mechanics or process of production is well understood by farmers and that they readily adopt new production technology. Farmers are also very cost conscious in the production field because the costs are individual, specific and identifiable.

On the other hand, there appeared to be considerable lack of understanding of the marketing process and the marketing costs, and we can only assume that this is in part because marketing costs are masked and accrue to the system rather than to the individual. Nonetheless, the costs are just as real and can be just as strangulating. Therefore, while the majority of farmers subscribe to the latest production technology for the purpose of lowering their production costs, it was obvious from the hearings that these same farmers prefer their elevators at 'horse-haul' distance. This is not intended as a criticism of farmers, but as a comment on the system.

It was frequently stated at the local hearings: "there could not be much wrong with the grain handling and transportation system when it was able to handle a billion bushels in 1971-72". This may be, but like any other complex system, it does wear out unless properly maintained. The rail system has not been properly maintained and is for many of the grain related lines "worn out". Likewise the primary grain elevator system is wearing out. As these facilities wear out, they are replaced with larger and fewer units capable of handling larger trucks and more bushels per unit of labour, just as farmers replace obsolete tractors with larger units which can do more work per man hour. Both the grain handling and the rail system recently reached a stage where rather drastic renovating programs had to be undertaken. The grain companies, due to a change in legislation, elevator tariffs, improved markets, more aggressive marketing, switched from a storage

oriented program to a throughput program.

The elevator industry has accelerated the consolidation of facilities in the past five years through closure of small inefficient units and construction of larger high throughput units at centralized points.

The railways have been in a state of freeze which has prevented them from doing likewise.

The marketing mechanisms have not paralleled the production technology and unless action is soon taken to update the handling system, we will face the position where we are unable to deliver our increasing production due to an antiquated system. The Commission is concerned about the masking of marketing costs which has the effect of inhibiting the development of better marketing technology. Again, the Commission was impressed with the general knowledge of farmers about their production costs and were also impressed with the fact that many producers making presentations were unable to provide information on the level of their local elevator tariffs or the statutory rate from their own delivery point, let alone other costs and levies such as terminal changes, cleaning charges, drying, Wheat Board costs, etc. It became obvious that greater efforts should be put forth by the grain companies, extension agencies, the Canada Grains Council, Canadian Grain Commission and the Canadian Wheat Board to acquaint these grain producers with marketing processes and costs.

Producer Constraints

As cash outlays for production increase, the farmer has to be cognizant of all costs and, just as larger units and more specialization mean that small margins can mean a profitable operation, adversity in any of the vulnerable areas can also render losses. Farmers are therefore concerned that the transfer of part of the marketing costs from the system in general to themselves as individuals will, or could, significantly affect their economic welfare.

They did throughout the hearings make the case that they oppose long hauling distances because of the costs in cash, energy and time. In essence, they suggested the benefits of cost and time saving technology at home can be wiped out if the time and costs are transferred to grain delivery by unduly long hauls.

The spectre of large through-put elevators, few in number, at some 12 to 15 strategic points on the prairies, involving hauling distances from 50 to 100 miles was raised by opponents of the so called large inland terminals. Having regard to the opposition of producers to hauling distances in excess of 25 miles, producers have no need to fear any developments of this kind and none were proposed. There will be fewer and larger through-put facilities spaced some 25 to 30 miles apart, but no credence need be put on the idea that there will only be a limited number of very large inland facilities.

Regulatory

Throughout the years, producers have sought the development of

institutions and programs which reduce the risks to their enterprise. In the early days of development of commercial agriculture in Western Canada, farmers fought the monopoly of the railways over warehousing, and gained concessions, one of which, the producer car, remains today as a safeguard against discrimination by grain handling companies. They also fought for and obtained the Manitoba Grain Act to ensure grade standards and marketing regulations to protect both farmers and customers. They established their own co-operative grain handling organizations to compete with the private trade and to share in the profits of grain handling. They successfully fought for the establishment of the Canadian Wheat Board.

As concessions were obtained for the benefit and protection of the producer, regulations were also developed to ensure the functioning of the emerging institutions and programs. There are strict regulations in place which, while offering the service farmers required, also in the mind of many producers limit their flexibility and opportunities to take advantage of profitable occasions when they arise.

Programs such as the assigned quota system, off-board feed grain marketing, cash advances on farm stored grain, deferred cash tickets, have been designed to provide an element of flexibility while at the same time allowing producers to subscribe to an orderly marketing system. Terminating quotas have been introduced to enable the Canadian Wheat Board to take advantage of market opportunities and spread farmer deliveries throughout the year. Although terminating quotas have been irregularly applied, no system of delivery penalties or premiums has

been established to ensure compliance. This should be done.

As each program is instituted, the consequences of its application must be taken into consideration. There is no doubt that programs designed for farmers are initiated with good intent, but the resulting regulatory constraints may be counterproductive.

Some suggestions have been made that the way to forestall the proliferation of large so called inland terminals is by restricting the weight load of trucks carrying grain to them. No one doubts the sincerity of those who advocate this. However, it must be recognized that such restrictions may cause greater damage to the marketing system and the economy than to the roads.

As well, adherence to the "too low" handling tariffs may render even the new or renovated elevators uneconomic.

The grain handling and transportation system must enjoy some of the same flexibility for the adoption of new strategy and technology as the farm production sector, otherwise the efforts of producers will be frustrated by a reduced ability to market.

An improved system will require both capital and increased operating revenue. These extra investments and costs will be shared by the farm and non-farm sectors.

Transition Period

To provide equal delivery opportunity in the transition period as lines close, the Canadian Wheat Board should adjust car allocations and grain loading blocks to ensure an equality of opportunity to

producers throughout the grain growing areas.

The increased use of trucks will increase road maintenance costs; abandonment of lines will result in savings to the Federal Treasury of monies heretofore paid to the railways, as Branch Line subsidies. In Chapter 12, the Commission discusses the degree to which the Federal Government should participate in funding these increased road costs.

It is inevitable that additional rationalization of the system must occur even beyond the abandonments recommended in this report. Producers are no doubt fully aware of this.

Each and every change in the system will be at a cost to someone. At the same time, to make no change will continue the disintegration of the system at a high cost to all. The Commission has sought to minimize the transfer of costs of changes to the producer.

The recommendations also suggest a method of cushioning the immediate loss of railway assessment to municipal bodies where lines are abandoned.

The loss of a rail line will not, in all cases, necessarily mean the loss of the elevator. In Chapter 5 , the Commission deals with the concept of "off-line" elevators which would be maintained at selected locations at no extra cost to the producer-user.

2. SOCIAL AND COMMUNITY IMPLICATIONS OF RAILWAY ABANDONMENT

The Commission, not only by command but by conviction, was

committed to take the social implications of recommended changes in the railway configuration into account. At every rural and regional hearing, an emotional plea was made for the retention of the rail lines on the basis that they serve as the focal point and vestige of community viability. It was stated repeatedly that the removal of the rail line and therefore the grain elevators would cause the hamlet, the village or the town to die.

The sincerity of the people making these presentations is unchallenged. However, the validity of the suggestions, insofar as the extent of the effect is concerned, is less certain. It appears that there may be a tendency to equate the significance of the railway of 30 to 50 years ago with its significance today.

Because of the vastness of the country and sparseness of population, transportation in Canada is extremely important for both social and economic purposes.

Good transportation is a necessary condition for the development and growth of most industries and businesses. It is essential to the social well-being of Canada's population, particularly in the hinterlands for the movement of people and commodities. In the development of Canada during the late 19th and early 20th century, rail transport served practically all purposes in Western Canada. However, with the advent of the motor car, good roads, trucks, buses and aircraft, the transportation patterns have changed dramatically.

Although the railways continue to render some "people" service for long distance transportation, the aircraft has largely replaced

rail in the five hundred mile plus category. For short run transportation of people, under two hundred miles or so, the bus and private auto have almost entirely replaced the railway. The regular and efficient bus service established in the three provinces has rendered travel by train almost a thing of the past.

In a similar way, rail has ceased to serve as the carrier of mail and express goods to most communities. It has, however, continued to provide the chief mode of movement of heavy bulk commodities over long distances while trucks serve the transport needs for almost all staple goods and a large proportion of other goods of short haul.

Even bulk farm inputs such as fertilizer, fuel, chemicals and equipment are increasingly hauled from regional distribution points by truck. The nature of rail service on the "as and when required" basis for grain shipments, under the block shipping system, is such that it is unable to meet the distribution requirements for these items, while regular train service would exceed transportation requirements. At local hearings, in communities, where there was no regular service, it was often suggested that if rail service was regular it would be utilized by local merchants. At other hearings, where service was regular, it was suggested service on an "as and when required" basis would be more economical and still serve the important grain haul interests well.

Similarly there was a time when such items as bread was transported by train, as were soft drinks, beer, dry goods and groceries. There was no other mechanized mode. Labor for delivery from station to

store was available through the local "dray man". Today, most of the companies supplying staples to even the large communities in Western Canada use trucks. The convenience of one handling from company dock to the retail store is now subscribed to because of good all weather roads, modern dependable trucks and the high cost of additional handling of goods.

The railways have ceased to have any great effect on the social aspects of life in the smaller communities in Western Canada. It was borne out at local hearings that because elevators are located on track, the effects of railways on communities are associated with population and employment more so than by the service they render. In communities of under 100 population, the employment so generated is proportionately significant. In these centres, just as in larger centres, there is an earnest desire to maintain or increase the population, because by so doing, the social viability and economic opportunities are enhanced. Most small communities desire water and sewer services, schools, hospitals, and amenities which can only be obtained if the population warrants. These are worthy goals and the quest for them is understood.

The Commission does not consider it proper for it to suggest what size of community is deserving of rail service, and which is not. The Commission likewise cannot fully measure the effect of a rail presence or removal on the social viability of communities. After 77 local hearings, it has become evident to the Commission that community viability can only be perceived; it cannot be defined.

It is the people and the spirit of the people which gives the community viability, not the railways nor the elevators.

The Commission does not doubt the psychological effect that the removal of the railway will have on many residents. Many of the inhabitants of affected communities will have already experienced the loss of such things as the livery barn, the steam train, the school, or the telephone exchange. Whether we deem the phasing out of these elements of community life to be signs of progress or not, it is a fact that these facilities were the victims of our developing technology and social change, unrelated to rail abandonment.

A practical and superficial examination of factors which have led and continue to lead to a reduction in the size and number of villages and small towns indicates that many of the very items which rural people would be the last to forgo have had the greatest effect.

Rural electrification has no doubt had the most significant positive social impact on rural life. The refrigeration possibilities it created spelled the demise of such important services as the local butcher shop, and the quick freeze locker plant. Due to the ability to keep bread, fresh vegetables and fruits for a longer period, these commodities were purchased in greater quantity, farther from home leading to the closing of local bakeries and stores.

Vastly improved roads since the early 1950's, along with more comfortable and dependable cars and trucks, have enabled people to travel further for goods and services. No one would wish to forgo these developments. Towns being by-passed by modern highways, the

development of regional health centres, and a host of other items have contributed to the phasing out of many smaller centres with their own identities and social patterns. These changes have occurred and will continue to occur, with or without the railway.

Just as the development of larger school units dictated that all former communities would not have a school, and the amalgamation of weekly newspapers also dictated that every community would not have its own newspaper, it is also a fact that all rural communities in Western Canada cannot grow. Many briefs presented at local hearings agreed the railway system in parts of Western Canada was overbuilt. The community patterns followed the railroads. The inference is that our system of communities was also over-built in the light of technological development, and that all could not survive under conditions of larger farm units, mechanization and accompanying decreased rural population. The evolvement of fewer centres rendering a large number of services has taken place only because several smaller centres have decreased in size or disappeared altogether. This took place, not as a part of a planned development, but as a result of many people making individual decisions on where they wished to shop, do business and socialize. This process has speeded up recently as society subscribes to broader educational curricula and therefore larger schools, to more comprehensive and therefore fewer hospitals, to the development of extensive water and sewer systems, and to fewer and larger machinery dealerships. This same trend is happening to the grain elevators. As sophisticated services are required, higher elevator wages and costs

are incurred, and better roads and trucks permit longer hauls, it follows that there will be fewer but larger elevators. For example, in 1966-67, the average grain handled per elevator on the prairies was 164,452 bushels; in 1975-76, it had increased by 34.2 percent to 220,747 bushels. During the hearings, the Commission was informed by elevator companies that to be economically viable, a modern new elevator must handle between 700 thousand and one million bushels in any one crop year. Indications are that the trend toward consolidation of elevators and the decline in their number will continue into the future. Elevators are bound to be further apart and all rural centres which now have elevators will not have them in the future whether the railway is present or not. These developments are not part of a grandiose plan on anybody's behalf. Indeed such planning would be contrary to the principles of many rural people. It is a natural evolution which is taking place in keeping with the adoption of modern technology and social goals. The Saskatchewan Retail Merchants Association has carried out studies and surveys. The Association estimates and deems it desirable that good centres of service will eventually stabilize when centres providing a wide variety of services establish themselves some 40 to 50 miles apart. Their argument is that at this distance, populations will be large enough to offer a full range of services but at the same time close enough to avoid communication hardship.

Early in the century when it was the sole form of mechanized overland transportation, the railway was important to the community for the service it rendered. The same principle must apply today. The

effects of railways on a community must be by virtue of the services rendered, not by the employment they directly provide. In other words, railways and transportation do not serve a purpose on their own. As a service industry, it is performance, not presence, which is of importance to the community. If the system has little or nothing to service, there is no virtue in the retention of the institution.

It has been argued that the removal of the railway automatically spells the doom of a community. Towns on the prairies which have recently come into existence are "bedroom" communities adjacent to urban areas and some industrial towns next to mines, etc. Communities which have not yet attained the status where they are identified as growth centres through the construction of schools, water systems, hospitals, government offices, etc., have very liitle chance of ever becoming centres of service and the possibilities of their growth in the future are remote with or without a railway. Studies* have been carried out for the purpose of identifying the factors which contribute to the growth and development of communities. Railways are seldom mentioned as a factor.

Surveys carried out in Manitoba and Saskatchewan in which farmers and businessmen in small towns have been interviewed, indicate and anticipate detrimental effects on the business and social life of the community should the railway be removed. The Commission does not

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* Olsen & Brown, A Study of the Growth of Selected Service Centres in Saskatchewan. University of Saskatchewan, Research Report 75-03; January, 1975.
Economic Effect of Rationalization on the Grain Handling and Transportation System on Prairie Communities. Underwood, McClelland and Associates, 1972.

doubt the sincerity of this expression of opinion. Although comprehensive studies on the effects of abandonment are scarce, there are some, two of which are referred to above, which suggest the factors that contribute to community stability and growth. The important factors are local leadership, social facilities such as hospitals, schools, etc. In one comprehensive study in Iowa* where actual abandonment had occurred, it was determined in interviews with local leaders that rail abandonment had had little effect upon employment and businesses in those communities. They indicated that most changes occurring in the businesses were not related to rail abandonment.

There is no doubt that the smaller the centre the greater relative effect of the presence of the rail line and the grain elevators on municipal financing. In the very small centre, the three or four employees of the railway and the railway related businesses along with their families also significantly affect the local churches and the curling club, etc. However, the Commission was unable to locate any study which indicated that the viability of a community which was already declining would be saved by the retention of the railway.

The Commission subscribes in full measure to the principle of rural development and the enhancement of employment opportunities in rural Western Canada. The suggestions contained in other parts of this report are aimed at gaining or regaining for Western Canada a larger portion of the secondary processing industries associated with agri-

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*. A summary of an economic analysis of upgrading branch lines; a study of 71 lines in Iowa. Iowa State University, Ames, Iowa.

culture. This does not mean the retention of every hamlet and village, nor the retention of branch lines which are now or will become redundant. In many of the present villages and towns, the only user of railway services are the grain elevators. The long term projections and plans of the elevator companies contemplate a substantial reduction in the number and locations of elevators by closure of many smaller units due to their obsolescence. When these are phased out, the railway will cease to serve any function.

As stated elsewhere in this report insofar as grain related lines are concerned, it is to a large extent the existence of grain elevators which will determine the railway configuration. The exception is where the economics of this principle are completely out of line. By virtue of location of new larger elevators now built and plans for future elevator construction which have been provided to the Commission, it is evident delivery points will be phased out and subdivisions or parts of subdivisions will become redundant.

The Railway Act - Section 254 (3)

The merits of each line up for consideration, and the communities on them, were weighed by the Commission. The Commission gave full consideration to the requirements of Section 254, subsection 3, of the Railway Act which stipulates items which must be taken into consideration when a railway applies for permission to abandon a line. In this context and in addition, the Commission considered and sought information as to:

1) the highway facilities in the area served by the line;

2) the distances from stations on the line to alternate stations on other lines;

3) alternative modes of transport in the area;

4) any seasonal restrictions on such alternative transport;

5) any known potential resource development in the area;

6) any services planned for the future;

7) anticipated changes in the transportation practices of those using or likely to use the line proposed for abandonment;

8) the effect of such changes on other lines and other carriers in the area;

9) the feasibility of continuing to operate all or part of the branch line by changing the method of operation or by inter-connection with other lines of the company;

10) the feasibility of continuing to operate all or part of the branch line either jointly with or as part of the system or another railway company by sale or lease of the line or segments thereof to another railway company, or by the exchange of operating or running rights between companies or otherwise, including, where necessary, the construction of connecting links with the lines of other companies.

These items and more, as indicated in Chapter 11, "An Evaluation Framework" were studied by the Commission as a basis for the recommendation on particular lines.

Where, in the opinion of the Commission, there was reasonable expectation that railway service would be required within the foreseeable future by a community to develop its known resources, the Commission has recognized this requirement.

For this reason, a quick examination of the recommendations for some retained subdivisions versus some recommended for abandonment may appear inconsistent from strictly a grain handling density viewpoint.

Rail is and will continue to be the principal mode of transport for the movement of grain. As a transportation mode and as a service to producers, railways will continue to play an extremely important role in Western Canada. It is as a service to the farm community, not as a community employer, that the railways will render their contribution. Resources spent on the retention of very light density, and in some cases redundant lines, subtract from the resources necessary to render efficient service for Western Canada as a whole.

These findings and principles are the foundation upon which the Commission structured the rationalized grain handling and transportation system required to serve adequately the needs of Western Canada throughout the next quarter century.

CHAPTER 4

A MODERN CONFIGURATION

A MODERN CONFIGURATION

In Chapter 11, this Commission is recommending the abandonment in stages to the year 1981 of 2,165 miles of grain-related prairie branch lines, as is detailed in Table XII.1. This 2,165 miles includes 534.2 miles which have not been in operation for as much as two years. At the other end of the spectrum, the Commission has found, as is also discussed in Chapter 11, that some 1,813 miles of prairie branch line have characteristics which warrant their retention as part of the basic rail system to the year 2000 and beyond. Continuance, conditioned on need, is the status recommended for the remaining and largest category of light density branch lines amounting in all to 2,344 miles.*

Given these findings, what kind of railway system will serve the needs of the prairie provinces until the year 2000?

It will be a railway system which, like the present one, is composed of main lines and branch lines but with an altered mix of heavy and light density lines; one in which 2,165 miles will have been abandoned by 1981; other lines will be abandoned over the years. It is illogical to believe that all lines not now recommended for abandonment will automatically survive until the year 2000. By the year 2000, to meet the needs of the prairie provinces, the railway network will have been adapted to contemporary and foreseeable conditions and requirements; it will no longer reflect, as it does today, circumstances which have long since disappeared.

Contrary to what was said in the MacPherson report, the development era of railway construction in Canada is not at an end. New construction

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* Includes 22 miles of new construction.

will be required.

The magnitude of agricultural development and other resources in the Peace River Block, both in Alberta and British Columbia, will require railway construction and integration in the near future.

The Commission holds that this new construction which must, and will, take place should be under the aegis of Canadian National but separated from the normal commercial operations of that company so as not to distort its budget and financial picture. There should be created a separate development department of Canadian National to undertake the development, the construction and the operation of any development enterprises, particularly in Canada's Northland. This concept is more fully developed later in this chapter.

The Federal Government has in the past participated in northern transport development in such projects as the Hudson Bay Railway and the Great Slave Lake Railway, both of which were incorporated into the Canadian National Railway System. It is currently again participating in northern transport development jointly with the province of British Columbia in the Joint Transportation Development Program-Northern British Columbia, for an extension of the British Columbia Railway and Canadian National to Dease Lake and on to Lower Post within the Yukon Territory; the latter project being covered by an agreement in principle between the Federal Government and the Government of the province of British Columbia. These types of projects of necessity have to be funded by the Federal Government or by

joint Federal-Provincial programs until they become economically viable and integrated into the main Canadian National system for all purposes.

Prairie Rail Authority

As to the remaining two groups of lines, those whose continued operation hinges on demonstrated need (2,344 miles), and those recommended for abandonment (2,165 miles) by the year 1981, our primary interest is to identify the administrative, operational and financial arrangements which will best serve the public interest, i.e., serve it in such a manner as to minimize the difficulties of transition from the network as we have known it to a system designed for contemporary and foreseeable conditions. In our view, it would be appropriate to centre such arrangements in a new entity to be known as the Prairie Rail Authority funded by the Federal Government.

In recommending a new body to address the several issues posed by grain related branch lines, the Commission is not endorsing the concept of automatic survival for all lines not now recommended for abandonment.

The management of these lines should be entrusted to this new administrative body, consisting of three members based in Western Canada and directly accessible to the producers affected by the operation of these lines. This new body, independent of the railways, appointed and funded by the Federal Government would have complete jurisdiction to manage the lines and to keep them in a sufficient

state of repair and in operation for as long as they are needed.

The major function of the Prairie Rail Authority would be to institute tests of fitness for branch line survival and apply these tests without fear or favour over the years ahead. This Commission is not recommending the addition of another permanent branch to the already over-burdened bureaucratic tree. On the contrary, we believe that self-liquidation should be the ultimate goal of the Prairie Rail Authority, as will become apparent in what follows:

-- Organization, Powers, Duties

The Commission believes that the Prairie Rail Authority should be a Federal crown corporation, chartered effective no later than January 1st, 1978, with headquarters in the West. It should be empowered as may be appropriate to carry out the following duties:

1) Lease, at a nominal fee, say $1 per branch line per year, all grain related branch lines now designated as Category "B" which do not become part of the basic rail system;

2) Contract with Canadian National and CP Rail to conduct train operation and related functions on these branch lines on a cost reimbursement basis, including a management fee, and subject to such incentives and penalties designed to obtain efficient operations as the Prairie Rail Authority may deem appropriate;

3) Contract with Canadian National and CP Rail to perform such roadway maintenance as may be required to conduct safe train operations in accordance with prescribed service standards;

4) Contract for the provision of truck service in substitution for rail service after cessation of the latter on branch lines which are abandoned, where an off-line elevator is continued in operation;

5) Gather independently and from the railways, data on the physical condition of branch lines subject to its jurisdiction, which is at all times current and complete;

6) Determine whether and to what extent rehabilitation of branch lines subject to its jurisdiction is justified, having in mind all known facts and forecasts concerning grain production and shipment on each line, as well as availability of and cost of shipment via alternate lines, in such manner as to secure maximum extension of service life for a minimum expenditure of funds;

7) Contract with Canadian National and CP Rail to perform such roadway rehabilitation as may be required in accordance with 6) above.

8) Monitor contract performance as to train operation, roadway maintenance and roadway rehabilitation;

9) Prescribe standards which will govern the provision of train or truck service on individual branches in a manner responsive to the needs of grain producers. This will entail the exercise of a sophisticated liaison not only with producers and the Canadian Wheat Board, but also with the elevator companies and the railways, so that block loading and frequency of operation are responsive to known and forecast demands for service;

10) Authorize, given demonstrated need, a "Basic Network" designation for individual branch lines, or portions thereof, for inclusion in the basic rail system, guaranteed to the year 2000.

11) Authorize the abandonment of branch lines lacking a demonstrated need for their continuance; and

12) Control elevator sitings along its lines. The purpose here is to preclude an uncontrolled proliferation of elevators along the Prairie Rail Authority lines, which should be operated so as to ensure continued service at present elevators, and otherwise to be responsive to such changes in marketing patterns as may evolve.

It may be desirable to be explicit on certain matters implied by the foregoing. It is our intent that power to sanction abandonment of these branch lines be exclusively vested in Prairie Rail Authority; such power should be, we believe, for this limited purpose transferred from the Canadian Transport Commission. The latter body would, however, in the regime we recommend, continue to exercise its regulatory jurisdiction over rates and charges applicable to commodities other than statutory grain which originate, terminate, or move over, lines regulated and

operated by or for the account of Prairie Rail Authority, pursuant to wheelage agreements with the railways.

Before making an order for abandonment of any line under its jurisdiction, the Prairie Rail Authority will cause a hearing to be held in the locality of the line proposed for abandonment, and, having duly advertised the hearing shall proceed to hear all interested parties. The Committee to hear such applications shall consist of the three members of the Prairie Rail Authority, supplemented by a member appointed by the Province in which the line is situated, plus another member appointed by the Rural Municipality Association of that Province. The Committee shall within 90 days render a decision which shall be final.

Another implicit characteristic of the Prairie Rail Authority is its self-liquidating nature to which we have previously referred. By this, we have reference to the obvious fact that the jurisdiction of Prairie Rail Authority, its work and its deficit (to which we shall come shortly) should all tend to decrease, at first relative to other economic activities, and eventually in absolute terms when, with the passage of time, more and more trackage is either designated for permanent retention or abandonment. It is our intent that an explicit goal of the Authority be to have all lines subject to its management pass from its jurisdiction either to the basic network or through abandonment by the year 1990.

Contracting with Canadian National and/or CP Rail to conduct train operations and related functions, as well as roadway maintenance, would not create labour problems nor difficulties with the railway labour unions.

We recognize that an innovative operating and regulatory pattern such as we advance here is of mere academic interest, unless it meets

the requirements of those whom it is meant to serve. It seems appropriate, therefore, to consider next the posture of the Prairie grain producers, with a railway network adapted to the present and foreseeable conditions, before considering the economic and financial underpinning of the grain gathering system we recommend.

-- Producers

A point we wish to emphasize at the outset is that the changes we propose in the Prairie rail network relate to the manner in which that network is operated, regulated and financed, and in no way to the manner in which individual users of the network conduct their affairs. These changes should, if properly carried out, improve the quality of available grain gathering transportation, eliminate some of the uneconomic aspects of that process as it has heretofore been conducted, and have a salutary effect on Canada's grain marketing efforts in a highly competitive world market. We stipulate that there will be no adverse impact on the individual grain farmer, since the changes we propose do not entail adjustments in the present freight rate groupings, elevator locations, points of grain delivery or marketing patterns generally. Applicable statutory freight rates will apply, as they do now, on grain forwarded from the primary elevator locations currently used. Present rate relationships between different producing areas will remain undisturbed.

It is important to stress that Prairie Rail Authority will sponsor contract operation for its account, of truck-substitute service in areas where rail branch lines are abandoned, and off-line

elevators continue in operation. This will have no effect on individual producers. They will bring their grain to the elevator which enjoys their custom today. Upon abandonment that facility would, if viable, become an off-line elevator, from which grain would be forwarded by Prairie Rail Authority contract truck to an alternate location - presumably the nearest main or branch line point with continuing rail service.

-- Operating Economics

As we use the term here, operating economics includes income derived from the branch lines, offset against the costs of servicing them. By the Commission's formulation, Prairie Rail Authority income collected will consist of elevator or land rentals, wheelage on its non-grain traffic and that share of revenue, if any earned from statutory grain traffic originating on its lines, which exceeds the revenue derived by application of statutory rates to the nearest basic network junction point. All revenue accruals in those cases where the same rate applies to the movement of statutory grain both from its actual origin station and from the nearest basic network rail point will be for the account of the railways which, it should be stressed, would receive identical or substantially similar revenue in the eventthe branch line were to be discontinued.

The principal elements of operating expense to be experienced by the Prairie Rail Authority are its contractual obligations to defray the cost of roadway maintenance and train operation or substitute truck service from off-line elevators.

The Commission on the Costs of Transporting Grain by Rail found that normalized line related costs in 1974 aggregated $20.9 million and $31.7 million respectively for 3,355.1 miles of Canadian National and 3,771.8 miles of CP Rail grain dependent branch lines. Assembled data does not lend to computation of branch line train operating costs corresponding to the line related cost figures cited above, but a system-wide comparison, set out on the following page, indicates that the ratio of train operation expense, including overhead, to road maintenance, property taxes and related overhead was 1.44 for Canadian National and 1.92 for CP Rail. Roadway maintenance, property taxes and overhead of the grain-related Prairie branch lines in 1974 was $12.2 million on Canadian National and $14.7 million on CP Rail. By application of the above ratios, it is estimated that grain related branch line train operation expenses would approximate $17.6 million and $28.2 million on Canadian National and CP Rail respectively. Thus, an order of magnitude estimate of normalized line related costs plus train operating expenses for grain dependent branch lines approximates $38.5 million for Canadian National and $59.9 million for CP Rail*. As detailed in Chapter 12, the Commission is recommending that 1,451.5 miles of Canadian National line and 892.1 miles of CP Rail line be transferred to the Prairie Rail Authority. The roadway and train operating costs calculated on a mileage ratio basis for these lines would total $30.9 million.

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* These figures exclude all elements of freight car costs and depreciation, which are conventionally designated as operating expenses.

TABLE IV-1

Ratio of Train to Roadway Expense
For Class I Railways of Canada
1974

Roadway Expense		CNR	CP Rail
		.....(000).....	
Total Road Maintenance		$ 248,257	$ 130,389
Plus: Total Provincial Municipal and Special Taxes		36,384	26,892
Less: Quebec and Ontario Income and Quebec Pension		1,757	4,364
Total Road Maintenance and Taxes		$ 282,884	$ 152,917
Train Expense			
Locomotive Repair and Depreciation	(311A,331)	$ 74,994	$ 71,208
Equipment Overhead*		11,183	11,258
Dispatching	(372)	14,792	9,706
Enginemen and Trainmen	(392,401)	115,501	70,702
Fuel	(394)	71,420	54,154
Supplies	(398)	4,449	4,291
Enginehouse	(400)	16,448	11,229
Train Other	(402)	56,174	38,206
Signal Operation	(404)	670	446
Communication	(407)	12,244	3,530
Transportation Overhead**		29,170	19,226
Total Train Expenses		$407,045	$293,956
Ratio of Train Expenses to Road Maintenance and Taxes		1.44	1.92

* Estimated at 20 percent of account 311A

** Estimated at 10 percent of the sum of Accounts 372, 394, 398, 400, 401, 402, 404 and 407

Source: CNR and CPR Annual Reports to Canadian Transport Commission 1974

It is apparent without detailed analytical treatment that the Prairie Rail Authority share of freight revenue* under the operational and regulatory arrangements we believe to best serve the broad public interest, will constitute a substantial shortfall from the Authority's operating cost, even if allowance is made for a generous margin of error in our assumption of a constant ratio, system and branch, between Road Maintenance and Property Taxes on the one hand and Train operations on the other. Thus, the Prairie Rail Authority would inherit, as we see it, a situation which has existed for some years. When, after World War II, it became apparent to the railways that grain-related branch lines were deficit operations, the carriers were nonetheless required to continue their operation in discharge of their common carrier obligations, and in furtherance of an embedded policy that the economic well-being of the nation would take precedence over the commercial viability of individual lines or services. However, the National Transportation Act of 1967 relieved the railways of this burden in accordance with its philosophy that "each mode of transport, so far as is practicable, receives compensation for the resources, facilities and services that it is required to provide as an imposed public duty."** By the provisions of that statute, the railways were to be reimbursed in full for approved costs incurred in branch line operation, and pursuant to it, they had

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* In 1974, statutory grain amounted to 91.9 and 89.5 percent of the respective tonnage totals on grain-related branch lines of Canadian National and CP Rail, generating total freight revenues of $42, $46, and $1.3 million for Canadian National, CP Rail and NAR, respectively. Commission on the Costs of Transporting Grain by Rail, Report, Volume I, Appendices F and H.

** 14-15-16 Elizabeth II, Chap. 69(1)(c).

received, as of December 31, 1976, the following subsidy payments in respect of the calendar years indicated.

	Section 256 Unprotected Lines	Section 258 Protected Lines
1968	--	$ 903,551
1969	--	897,114
1970	$ 1,209,908	13,248,382
1971	2,938,716	29,792,179
1972	4,117,550	33,666,504
1973	4,283,670	41,269,213
1974	--	75,521,395
1975	226,434	82,378,981
1976	397,340	80,746,897
TOTAL	$13,173,618	$ 358,424,216

At inception of the Prairie Rail Authority, subsidies to the railways for grain-related branch lines will cease, but the expenditure of resources in excess of revenues will persist, although we anticipate that the excess will be of ever decreasing magnitudes as time passes and will altogether evaporate by the year 1990 when need will have been demonstrated or disproven on all lines entrusted to the Authority's care. In the 12 year life of the Authority, however, a substantial railway mileage, shadowed by unresolved questions of need, must be administered; for this mileage, the gap between cost and revenue must be met if service is to continue.

It is manifest that few, if any, areas of the economy are untouched by subsidies, that subsides are as old as government and have long

been used as an acceptable mechanism in the National interest. In the present case, the government's purpose should be to ease the transition from old to new practices for the paramount sector of the nation's agriculture, which is by any standard a most worthy policy. Moreover, the recipient of the annual subsidy required to meet branch line operating deficits will in the future be a body dedicated exclusively to the public service and relieved of the commercial standards employed by the corporations it will supersede. Finally, the subsidy recipient will have a limited life, a terminal date and a mandate for self-liquidation. We have no hesitation, therefore, in recommending that the Federal subsidies now authorized by Sections 256 and 258 of the Railway Act be replaced effective January 1, 1978, by a funding mechanism, sustained from general revenues of the Federal government, adequate to sustain the Prairie Rail Authority in discharge of its duties as we have described them.

-- Physical Plant

A major advantage of the Prairie Rail Authority is that it will arrest and correct the long term physical deterioration which has been experienced by the grain-related branch lines. As we have elsewhere noted, the lines over which the Prairie Rail Authority will take jurisdiction are typically not in the best physical condition. Although some lines have had relatively recent work and permit unrestricted train operation, a far larger number of lines require varying degrees of rehabilitation, and are characterized by worn rail, rotted ties,

fouled ballast, inadequate track materials and a complete absence of ditching and therefore permit train operation only at curtailed speeds. These conditions have developed despite the subsidies previously arrayed, because the railways have believed, rightly or wrongly, that the magnitude of approved subsidy payments has been inadequate. They have therefore deferred substantial amounts of normal roadway maintenance which, in turn, has consumed the rail, ties, ballast, etc., already in place at a rate faster than might otherwise have occurred.

In addition to maintenance deferrals, the railways have largely, if not completely, withheld injections of new capital into their grain-related branch line plant, apparently because earnings on new investment were limited by cost of money rates established by the Canadian Transport Commission, without provision for income tax.* Critics of this subsidy system including this Commission concluded that the subsidy mechanism was defective because it provided for disbursement to the general revenues of the railways and failed to earmark funds provided so as to ensure their dedication exclusively to the branch lines.

This entire controversy becomes moot when the arrangements we recommend are instituted.. The Prairie Rail Authority will not only have a subsidy to cover the gap between current revenues and costs,

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* See CTC Order R-6313, Secs. 3.(3) and 3.(4), pp.434-5. The railways have consistently maintained (1) that CTC cost of money rates are too low by current money market standards, and even if they were higher, (2) the provision precluding an allowance for income tax makes new branch line investment imprudent.

but will also be provided with capital funds to rehabilitate the physical branch lines plant where and as needed. The lingering Prairie suspicion that funds meant to keep the grain-related branch lines functioning were expended on other parts of the railways, or disbursed as dividends, will be at an end.

The Prairie Rail Authority will have, of course, no mandate to operate "gold-plated" railways. On the contrary, and we reiterate, it should manage the funds entrusted to it in such a manner as to correlate roadway expenditure with anticipated road property service lives, balancing on each line quality service for the longest periods possible, with minimal residual values in the road property entrusted to it. In many cases this may mean continued minimal maintenance and low operating speeds.

The service here contemplated would be "as and when required". This involves recognition that service might not in many instances be on a year round basis. Many lines can be adequately serviced by periodically emptying the elevators on the lines at specific times of the year. Co-ordination to achieve the service needed would be required between the elevators, the Canadian Wheat Board and the Prairie Rail Authority. Management skills of the highest order will be required and it will also require the Prairie Rail Authority to address analytically some of the peculiar features of railway accounting, in that the required branch line roadway work, in addition to normal maintenance discussed above, divides into two parts:

1) "catch-up" maintenance, and
2) rehabilitation

each of which, in part, consists of operating expense, i.e., the current cost of doing business and, in part, is capitalized, i.e. becomes an asset

or a portion of the property used.

That some expenditure on branch line maintenance is conventionally capitalized brings us to considerations of ownership and property title. The lines to be transferred to the Prairie Rail Authority represent assets on the books of the railway corporations which hold title to them. As indicated previously, the Prairie Rail Authority will lease each line from its owner during the period of its jurisdiction. The ramifications of relationships between lessors, lessees and third parties are well settled at law, so considerations of ownership and title have little practical effect until individual lines or parts of lines are transferred from the Prairie Rail Authority to the basic network, or abandoned. In the former case, where the involved property is returned to its former owner, we foresee no problems. Where a Canadian National grain-related branch line becomes a portion of the basic network operated by CP Rail, or vice versa, conventional negotiations for sale and acquisition seem adequate. Where, however, a line is to be abandoned, questions immediately arise such as: Who will then own what remains of the property as it existed on January 1, 1978? Who has title to the elements of value which have been invested in the line of railway while it was managed by the Prairie Rail Authority? These issues could be magnified into controversies far exceeding their significance. We propose to forestall controversy by providing that, upon abandonment, the roadbed - that part of the property abandoned represented by land - vest in the provincial crown for disposition as may be mutually agreed to between the relevant province and municipal authorities.

Canadian National or CP Rail, as the case may be, have entitlement

to recover and remove, with one exception, such of the improvements to the property, rail, ties, other track materials, ballast, etc., as may, in their judgement be warranted. Culverts, the removal of which might alter established drainage patterns, or have other adverse effects, would constitute the sole item of improvements to be left in place if so ordered by the Prairie Rail Authority.

We anticipate some objection that the property disposition formula we have outlined involves some element of expropriation of railway property without compensation to the railway companies. That cannot be a valid objection. Under Sections 106 and 259 of the Railway Act, the railways have a legal obligation to maintain service on all lines until abandonment approval is given. In the case of grain-related branch lines, the railways ask to be relieved of this obligation, taking the position, with which we do not disagree, that they are operating these uneconomic lines at a great loss, even when given the branch line subsidies to which we have referred.

In our view, the railways cannot have it both ways. They cannot secure relief from their financial burdens, as we propose, and yet retain an undiluted title to the property in toto, particularly where, as we also propose, many elements of value in the property ultimately to be abandoned are likely to be, in the interim, enhanced by some degree of rehabilitiation involving new investment with public funds. We therefore deem it eminently just and equitable that in return for permanent relief from their legal obligation to continue a losing operation, and of having to restore the abandoned right of way to its former condition, the privilege of being allowed to abandon should be made conditional upon giving up ownership of

the land in the right of way. A substantial portion of this land is quite valueless in any event.

It is pertinent to note here that the Royal Commission on the Natural Resources of Saskatchewan found:

> ..."As time went on, additional land subsidies were promised to the Canadian Pacific Railway for subsidiary lines, and to other railway companies for other projected lines. By 1905, more than 55,000,000 acres of prairie lands had been so pledged, but only two-thirds of this acreage was earned by actual construction. Well before 1905, the policy of subsidizing railway construction by land grants had been discontinued but the process of selecting these lands so earned, and the after-math of tax exemption, remained for many years to vex the growing communities of the West."
>
> "It should be pointed out that practically the whole burden of providing land for these railway subsidies, not only for the railways within the Prairie Provinces as set up in 1905, but for the railways to the north, as well as for portions of the Canadian Pacific lying in Western Ontario and in British Columbia, fell to the lot of the three Prairie Provinces, chiefly to Saskatchewan."*

There should be no corporate crying over the return of rights of way to the Crown.

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* Majority Report, March 12, 1935.

Railways in the Northwest

Western Canada still has a large frontier for development which is becoming increasingly important. As we use our natural resources in the areas of present development, and as our cities and industrial complexes expand, engulfing some of our best agricultural land, and as world population grows, demanding more food production, we have to look at other areas for both food and natural resources. Expansion of agriculture and industry in this last frontier is assured; it is only a matter of time and expediency.

It is important that the groundwork be laid to expedite the development of this great area's potential in agriculture, oil, forestry, coal, iron ore, sulphur, etc. This last agricultural frontier in Canada is perhaps the largest in the entire world. The area for natural resource development is the north west area of Canada, which includes the north one-half of Alberta, the north east of British Columbia, commonly referred to as the British Columbia and Alberta Peace River Block, and the western part of the North West Territories. The area's southern boundary being an east-west line through Edmonton, roughly from the Saskatchewan border to the Rocky Mountains, extends into British Columbia and follows the eastern slope of the Rocky Mountains to the Yukon Territory and is bounded on the north by the Arctic Ocean.

Because of its geographic location and its limited accessibility by land and water, it is virtually an empire unto itself, that must have rail access to the rest of Canada and ocean ports.

This area in Alberta and British Columbia is more than twice the size of the Federal Republic of Germany. The agricultural area extends roughly from the 54th to 60th parallel, and the natural resource area extends beyond this to the Arctic. The Precambrian shield parallels the east side of the MacKenzie river with the Coppermine country to the north east.

The Government of Alberta submitted to this Commission a very imaginative proposal, to establish a North West Rail Authority to support foreseeable economic expansion in the northern part of the Province. This Authority, as Alberta conceives it, would be an entirely autonomous body, independent of Canadian National and CP Rail, empowered to own and operate all railway lines within the province north of Edmonton, or to have others do so on its behalf. The creation of such a regional rail authority would, the Province of Alberta submits, result in significant operating economies, enhance car supply, facilitate the elimination of rate anomalies, enhance resource development and, by implication, improve Alberta's access to world markets.

Specifically, the lines to come within the Authority's compass would include:

1) The entire operation of the present Northern Alberta Railways Company (NAR), linking Edmonton with Fort McMurray, Dawson Creek and the Peace River country;

2) The Great Slave Lake Railway (GSLR), extending between Roma Junction, Hay River and Pine Point (the latter two locations being in the North West Territories);

3) The Alberta Resources Railway (ARR), between Grand Prairie and Swan Landing; and

4) Certain northern extremities of Canadian National, namely the Athabasca, Bonnyville, Coronado and Sangudo subdivisions.

These now disparate enterprises should, in the view of the Province of Alberta, be joined together to accomplish the twin purposes of improved service to current railway customers and the provision of adequate capacity for the substantial growth in railway traffic which is foreseen. The Authority would be a partnership of public and private interests; its capital at inception would be the contributed railway lines comprising its constituent parts, now owned by the Provincial Government, Canadian National and CP Rail.

The principal justification for Alberta's proposal lies in its vision of unprecedented economic expansion, which foresees continuation of trends experienced during the last 15 years through to the year 2000. The result of such growth is foreseen to be a four-fold increase in Northern Alberta's railway freight by the latter year, as the following table shows.

TABLE IV-2

NORTH WEST RAIL AUTHORITY TRAFFIC FORECAST

Commodity	Present Tons	Existing and Firmly Committed	Existing, Firmly Committed and Proposed
	.....	... (000's)	.....
Bulk Grain	1,052	1,052	1,052*
Oil Sands Development	--	290	799
Sulphur	1,750**	465	1,200
Coal:			
Metallurgical	2,018	5,000	5,000
Thermal	--	--	10,500
Minerals (lead, zinc, iron ore, salt)	580	545	3,220
Forest Products	570	1,010	1,730
MacKenzie Pipeline Support	--	***	1,030
Petroleum Products	428****	N/A	1,700
General Freight	N/A	N/A	700
TOTAL	6,398	8,362	26,931

N/A Not Available

* Conservatively forecast as "no growth" in rail traffic due to increased on-farm consumption or local milling and reduction in export trends, and despite a 40% increase under cultivation.

** Current Sangudo Subdivision production from five gas plants, 1973-75 average. Forecast assumes exhaustion of this reserve before the year 2000, with sulphur tonnages from new sources less than current Sangudo volumes.

*** Assumes no pipeline construction

**** 1974 Northern Alberta Railway petroleum tonnage originated and received from connections.

To service this anticipated rise in the volume of railway traffic, the Province of Alberta projects a need to expend $230 million, between now and the end of the century, to upgrade existing rail lines of the North West Rail Authority through installation of new ties, heavier rail, improved ballast and new communications, and by replacement of old with new bridges.

This Commission cannot verify these traffic forecasts, but is of the view that the bulk grain estimate is much too conservative.

Within the Authority's territory, The Province of Alberta also anticipates that new railway construction, amounting to as much as 455 route miles, will be required to provide access to new development, principally mineral extraction, and including substantial agricultural components. Depending on which lines actually come into being, the expenditure (at 1976 price levels) will aggregate between $218 and $385 million.

The probable expenditure on new and improved railways envisioned by the North West Railway Authority proposal therefore totals between $448 and $615 million, significant sums even at currently inflated price levels.

Given the fact that these estimates of expenditure are only estimates, albeit by respected consulting engineers, and given the probability that not all the contemplated new lines will be constructed, it is apparent that our consideration of this concept centers on a prospective expenditure approximating one-half billion dollars.

Alberta emphasized that present and prospective railway capital budgets are inadequate to commit funds of such magnitude to relatively high risk projects within a (relatively) limited geographical area. Where then will the money come from? The submission from the Government of Alberta suggests that interest free Northern Development grants will be available, and it implies that the Province and the Federal Government, as partial owners of the North West Rail Authority, may also expect to be called upon. Canadian National and CP Rail however, as we shall note, were at no pains to offer capital. They do not share Alberta's great expectations, and they have many competing prospective uses for the limited supply of new capital.

We do not view it as an obligation of this Commission to conduct an exhaustive investigation of sources and uses of funds for railway expansion in Northern Alberta. In our opinion, the central issue is whether or not such improvements and additions are, in general, needed. If need is demonstrated and an appropriate administrative mechanism devised, we do not doubt that, in due course, the necessary means will be forthcoming from a variety of prospective beneficiaries. The Great Slave Lake Railway is an example of industry participation.

Whether there will be sufficient traffic to justify all or any major part of Alberta's proposal is the issue to which we now turn. The perils of forecasting far into the future are so well

known as to require litte stress here; no respected authority would, for example, on the basis of past experience, have foreseen Alberta's present prosperity at the conclusion of World War II, or even twenty years ago. The random happenings which influence events and trends, cannot yet be captured by even the most sophisticated techniques of extrapolation. It is, therefore, all the more true that enthusiasm, expressed in terms of concrete and steel, is as influential in shaping the course of human events as any fundamental economic and political trends which have penetrated the perceptions of conventional thinking people. In a word, the prophecies that governments make, have, as has been noted elsewhere, a tendency towards self-fulfillment. In the 19th century it was Canada's dream to build a nation by building a railway, and so it did. Seen in that context, Alberta's vision of northern development through railway reorganization is fundamentally appealing to this Commission.

The foregoing should not be construed as in any way intended to disparage Alberta's forecast of northern growth in the Province. This Commission was very favorably impressed with the efforts expended by the Province of Alberta to gather and present an organized body of information on anticipated growth in its northern areas, and with the results of these efforts. We do not underestimate the difficulties of securing a measure of factual information from the plans of a multitude of actual and potential entrepreneurs, each chiefly concerned with protecting his competitive position from premature disclosure of

proprietary intentions. What emerges from Alberta's submission is a certain combination of specificity and the lack thereof, but no lack whatever of activity reflecting confidence in an expanding and expansive future. This Commission believes that the weight of available evidence clearly indicates that many, perhaps most of the plans and prospects for northern development in Alberta, so exhaustively documented in the submission of the Province, will be transmuted to reality over the next generation, though not perhaps in the precise locations, volumes, or character now presented to us. This judgment is reinforced by the confidence exuded by the Provincial Government, a confidence which in itself will engender and foster an attractive climate in which present anticipations may more easily be brought to fruition. In our view, this confidence in the future, in which the Provincial Government so clearly mirrors the hopes and aspirations of the community it serves, will be an important factor in realizing the somewhat exuberant forecasts set out above. Since no one can deny that confidence reduces uncertainty, this Commission is persuaded that, on balance, a very substantial railway traffic increase will occur in Northern and Northwestern Alberta, and that appropriate measures must be taken to provide, in the national as well as provincial interest, for its accommodation.

We next consider the response of the railway companies to the proposal of the Government of Alberta. The most important railway operation in the area, with which we are concerned, is the Northern

Alberta Railway, owned in equal share by Canadian National and CP Rail, and dependent on its parents for car supply, though possessed of its own management and motive power. The submissions of the Northern Alberta Railway were principally concerned with Alberta's separately submitted proposals for certain new grain handling railway lines, viz., between Hines Creek and Fort St. John, and between Spirit River and Dawson Creek. Canadian National and CP Rail speaking for the Northern Alberta Railway took a dim view of these proposals, a matter which we consider elsewhere. Northern Alberta Railway, however, has not addressed itself to the broad-gauged perspective of economic growth, in the long term, with which we are principally concerned with here, nor has it any comment to make in respect of the North West Rail Authority, as to which it has -- "looked to the parent companies to carry the burden of analysis in evaluating the consolidation proposal."

The parent companies undertook to assess Alberta's proposal by an elaborate study of present versus combined direct operating costs of the Northern Alberta Railway, Great Slave Lake Railway, Alberta Resources Railway and Canadian National's Athabasca Subdivision*, in response to a request of this Commission.

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* The railways' study differed from the North West Rail Authority as proposed by Alberta, in that it excluded from jurisdiction of the Authority the Bonnyville, Coronado and Sangudo Subdivisions of Canadian National.

On the assumption that all present mileage was retained and that all traffic followed present routings, the joint submission of Canadian National and CP Rail concluded that consolidation would reduce annual direct costs by $135 thousand (at 1975 price and wage levels), but would not result in rate and service improvements to shippers and consignees in the area. Without reference in detail to the complete submission of the railways, it is apparent that measurement of after-consolidation cost behaviour in any such submission rests on a multitude of assumptions, stated and unstated. Such assumptions inevitably influence, and in fact, together determine the findings of a before and after survey, of the type advanced by the railways.

In the present case, there is abundant reason to believe that the railways have marshalled their figures in such a manner as to minimize the potential advantages of a unified operation in the territory. For example, the savings postulated by the railways' case gave no weight to the elimination of some 29 miles of parallel railway route mileage which could be realized from construction of the contemplated Kerensky-Egremont-Redwater connection of less than one mile in length. Elimination of 29 miles of rail line would result in a saving of approximately $230 thousand annually, in normalized maintenance costs alone.

By the same token, the railways have assumed post-consolidation:

1. A need for a fourth crew member on trains of the Great Slave Lake Railway, despite the lesser number now employed, an absence of grade crossings and minimal switching on the line, and the precedent of non-uniform crew sizes in their own yard operations;

2. No increase in equipment repair efficiency by reason of transfer to Dunvegan of work now performed at Roma Junction;

3. No increase in efficiency flowing from an expanded scale of operations, e.g. the possibility of using automated data processing for manual methods now employed by Northern Alberta Railway in accounting, record keeping, payroll and purchasing functions;

4. A need for redundant supervision at Hay River;

5. Continued movement of dead Great Slave Lake Railway locomotives needing repair;

6. No savings from more efficient use of roadway maintenance machinery; and

7. No reductions whatsoever in car costs from use, by some traffic, of less circuitous routes.

The foregoing list is by no means exhaustive, but it serves to confirm our view that in the premises, potential benefits from consolidation may well exceed, by a significant margin, the $135 thousand annual operating savings projected by the railways.

Alberta, by contrast, anticipates through a witness with extensive railroad executive experience, that single management operation by an independent entity would have the potential result of a one-time expense reduction of $1.037 million, and annual

operating savings thereafter of $982 thousand. We do not doubt that Alberta is putting its best foot forward by such an estimate, and conclude that the potential savings from unified railway operation in Northern Alberta will probably be on the order of a minimum $500 thousand per year, given present levels of traffic and scale of operations, with still larger economies to be realized when traffic grows.

Both railways, for somewhat different reasons, took the position that the concept advanced by the Government of Alberta was undesirable. Canadian National questioned whether current cost reductions could be achieved; pointed out what it believed would be relatively limited influence of the proposed Authority on rate and service arrangements, which necessarily have a supra-regional geographic reach; referred to the inherent conflict between Alberta's proposal and consolidation trends elsewhere on the continent, i.e. Con-Rail; rejected the thesis that the transcontinental railways do not now, nor will in the future, have the resources or the priorities, to meet emerging development needs; referred (without specification) to "other mechanisms available" to attain the same goals; stressed the lack of incentive for its cooperation; expressed its doubt that CP Rail access to an increased share of traffic within the region would benefit shippers and receivers; and voiced its reservations about the advocacy in Alberta's proposal of government roadbed ownership.

CP Rail, on the other hand, submitted that the proposal to establish a North West Rail Authority was beyond the terms of reference of this Commission. It joined with Canadian National to the extent of questioning at length the concept that government acquire ownership of all rail roadbeds in Canada, a concept which it totally opposes for a variety of reasons. CP Rail appeared to welcome the opportunity to share in traffic to or from the Great Slave Lake Railway, but otherwise found little merit in Alberta's concept, which it claimed would reduce, or altogether eliminate, its prospects, after many years of loss, for a commercial recovery from the Northern Alberta Railway.

We must emphatically disagree with the CP Rail opinion that our terms of reference limited this Commission to consideration "of how best to move grain to export positions". Rationalization of the network for grain gathering and movement is, to be sure, at the forefront of our concerns. Grain movement, however, though certainly prominent and controversial, is by no means the only transportation issue which public policy must confront. Our charge, as we construe it, is to consider any and all proposals, whether they are specific or global in scope, which may have an influence for transportation betterment in Western Canada over the years ahead. An evaluation of the North West Rail Authority proposal is clearly pertinent to the discharge of this obligation.

We also find that the other misgivings voiced by the railways, with a single exception, lack merit. The exception relates to the idea that government should own the rail roadbeds throughout Canada. As to that suggestion, CP Rail comments:

> "It involves an in-depth examination of concepts beyond the time and scope of this Commission, and cannot be dealt with on the basis of the generalized information presently available to the Commission. We note that the Province of Alberta agrees with this position."

We agree in general, and will discuss the concept no further, except to note that its implications and ramifications are so vast as to seem to warrant explicit consideration on a national scale.*

The other misgivings voiced by the railways are collectively characterized by the philosophy that established institutions are always best equipped without modification, to address new and unique situations as these arise. We do not share that view. Were it valid, Canada would never have emerged from its colonial cocoon. Central to our thinking, by contrast, is an urgent need for institutional change, adequate to address and resolve the transportation needs of a dynamic society. In such a milieu, the Alberta brief commands respect by its documentation of anticipated growth and its concern to provide for a future development which appears to this Commission as inevitable in its generality as it is hazy in its particulars. Accordingly, the Commission finds much of the

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* Reference to Chapter 6.

Alberta thesis to be persuasive. Appropriate steps should be taken to foster and encourage the railway infrastructure of the north, as distinct from railways throughout the nation, because it is to the north that Canadian hopes and aspirations are directed.

Since the railway infrastructure of the north is and would be primarily developmental in nature, it should not, in the Commission's view, be measured by the rigorous standards to which Canadian National and CP Rail quite properly must adhere, in the performance of their commercial duties. By the same token, the railway infrastructure of the north should exclude railway segments which have the potential for commercial viability within the time horizon we are addressing.

Having in mind that caveat, we believe it unwise to include the Coronado and Bonnyville Subdivisions among that group of lines which would be defined as developmental by the organizational scheme which we prefer. The Canadian National Coronado Subdivision is endowed with an economic future because of the salt mine at Lindbergh and the presence of the Cold Lake Canadian Forces base on the Bonnyville Subdivision.

Although we are persuaded by Alberta's thesis in general, we do not concur with its argument that enhanced northern development must be entrusted to a new railway organization.

The cadre of a new organization must, in any case, come from the present staff of the Northern Alberta Railway, who are tied

by tradition, practice, and in large part, by the sentimental links arising from initial employment, to Canada's major railways. A new organization should exploit the advantages of such human and commercial connections, while concurrently freeing the developmental railways from the constraints some of them have encountered by virtue of their non-profit status. Furthermore, the difficulties of recruiting experienced managers at arms length from Canadian National and CP Rail seem formidable. Finally, the Commission must give weight to the undeniable fact that all but minimal local traffic on the northern development railways must of necessity be interchanged with Canadian National and CP Rail for, or from, movement beyond Edmonton. To establish an altogether independent management and ownership could create, at inception, an adversary relationship with consequences basically the opposite of those we intend. The experience of the British Columbia Railway, which must rely on Burlington Northern, not on CP Rail or Canadian National, for its peak-period car supply, is instructive. And the northern development railways unlike the British Columbia Railway, will have no foreign connection to alleviate their motive power and equipment needs. We therefore believe that it is realistic and desirable to entrust the task of railway development in Northern Alberta and the Northwest Territories, to one of Canada's two major railways.

Having in mind its stewardship of both the Alberta Resources Railway and the Great Slave Lake Railway, its contribution of two

subdivisions to the proposed entity, and its half ownership of the Northern Alberta Railway, as well as its somewhat more extensive experience elsewhere in the operation of northern development railways, i.e. the Hudson Bay Railway; we find that Canadian National is to be preferred over CP Rail as the organization to be vested with managerial control over the prospective entity.

Selection of Canadian National also avoids delicate and troublesome ownership problems: present ownership may continue undisturbed with Canadian National acting as agent for CP Rail, for the Government of Alberta and for the Federal Government in much the same manner as heretofore, until the interest of CP Rail in Northern Alberta Railway is acquired by Canadian National which we recommend should be done.

Our selection of Canadian National as the best qualified operator is, however, based upon three conditions. The first of these is that Canadian National separate the Sangudo and Athabasca subdivisions from its Mountain Region, and combine them with the Northern Alberta Railway in a major new Northern Development Railways Department, to which it will grant the maximum latitude for independent action permissable under the Canadian National umbrella.

The second condition we find essential to the public interest is the establishment of an open interchange point at Edmonton. At the present time, shippers or receives are free to choose

either Canadian National or CP Rail to move their rail traffic between points on the Northern Alberta Railway and points beyond Edmonton, and this choice of rates or routes is reflected in applicable tarrifs, including agreed charges or contracts, on file with the Canadian Transport Commission. The routing options available to Northern Alberta Railway customers are, however, denied to users of the Great Slave Lake Railway, since Canadian National has elected to reserve itself the longest possible haul on traffic to and from points on that railway, which it has done by declining to permit the publication of through routes and joint rates via Edmonton and the CP Rail on all commodities moving to or from Great Slave Lake Railway points. Optimum development of the North, including its grain growing areas will, as we view it, be enhanced if this restrictive policy is superseded by one which grants equality of rate and routing privileges at all Northern Development Railway points, without exception. In a word, we find that the public interest will benefit by the publication, as to all commodities moving to and from all Northern Development Railway stations, of joint rates and through routes via Edmonton and the CP Rail, in addition to the maintenance of tariffs providing for Canadian National single line hauls.

The third condition modifying our selection of Canadian National reflects our dual concern to foster development of agriculture, especially grain production, in the Peace River Block

on both sides of the Alberta-British Columbia boundary, and to provide a rail gateway to the North, supplementary to Edmonton, to alleviate the line and yard capacity strain which we foresee at that point. Edmonton is, in any event, going to be under increasing pressure to supply yard capacity when the projected coal and other traffic comes on-stream, in the absence of provision for alternatives.

To meet this concern, and in order that maximum transport flexibility may at the earliest possible moment be made available to shippers and receivers, in the Peace River Block, we find that an open interchange should be established at Dawson Creek similar to that which we have found necessary at Edmonton. To give force to this proviso, tariffs should be published forthwith providing joint rates, and through routes, for both grain and other traffic from points on the Northern Alberta Railways and the Great Slave Lake Railway (later Northern Development Railway) to:

(i) Vancouver via Dawson Creek and the British Columbia Railway; and

(ii) Prince Rupert via Dawson Creek, the British Columbia Railway, Prince George and the Canadian National.

We are mindful that the Peace River Block, originally opened to development about sixty years ago, has never realized its full potential, and at present constitutes the last large agricultural

frontier in Canada and one of the largest in the world. In Alberta, the Peace River area has about 7,900 farmers cultivating at present about 4.730 million acres, producing about 23 million bushels of grain annually. Nevertheless, it has over six million undeveloped arable acres, primarily in the High Level - Fort Vermilion area, or about twice the amount of all Manitoba land sown to wheat in 1975 with 40 thousand acres of new breaking annually. On the British Columbia side of the Peace River Block, complete soil surveys have not yet been taken, but reconnaissance indicates over 1.2 million acres of good arable land, at least an equal amount of marginal land suitable for grazing and crop production, as well as another 20 million acres of Class 5 and 6 soils suitable for grazing.

If these lands are to be brought to and kept in cultivation, they will require rail access superior to that now available. We would expect the Northern Development Railway to exploit in full the potential capacity of lines placed within its jurisdiction, but, this accomplished, there would remain large portions of the area inordinately distant from good rail service or subject to excessive and costly transport circuity. To remedy this situation, it would appear that new rail construction will, over time, become appropriate. Maximum benefit can be realized from such construction only if it provides both physical and commercial links to the British Columbia Railway, thus affording an alternative to Edmonton, opening a shorter route to the Port of Vancouver, and providing an alternative to the latter at Prince Rupert. During our hearings

local interests, endorsed by the Government of Alberta, sponsored proposals to construct new rail connections seemingly responsive to the criteria we have enunciated, between Hines Creek and Fort St. John and between Spirit River and Dawson Creek. In a submission to us the Northern Alberta Railway analysed these proposals and found them defective.

For somewhat different reasons we have reached the same conclusion. Our concern is that the lines proposed to us lack the orientation to properly service the area of greatest future development potential; namely, that debouching eastward from High Level to Fort Vermilion and beyond. This clearly foreseeable need may be met by a second proviso of our third condition, namely that a new rail line be constructed from Fort St. John roughly northeastward, to a junction with the Manning Subdivision of the Great Slave Lake Railway, at a point more than one hundred miles closer to the major source of future grain traffic than either Hines Creek or Spirit River. We therefore find that the Northern Development Railway, among its earliest duties, should institute surveys to identify that route which most favourably conforms in general alignment to that here specified, and that construction of such a line should be initiated at the earliest possible time after route identification. It should also, as soon as possible, undertake to construct a line to Valleyview. Valleyview is a town of 1,700 population, 50 miles from the nearest rail delivery point, with some producers hauling as far as 100 miles. It is a greatly expanding agricultural area in which from two to three townships to the south are being opened for homesteading

each year. It is contiguous to a gas field in which vast quantities of sulphur are being accumulated awaiting a means of transportation to outside markets. Only with the coordination, both commercial and physical, which we find essential between the Northern Development Railway and its natural connections, can our third condition satisfy the development potential of the northern frontier which is central to our concerns.

Our adoption of a major part of Alberta's concept for railway development should not be misconstrued as an endorsement of purely provincial aspirations. An accident of geography has also made Alberta the fulcrum of national goals in the present context, centering as these do, on the MacKenzie Corridor springboard to the Canadian North. It would not be too much to say that the Alberta Gateway to the North provides a setting for the national dream in a contemporary context.

The MacKenzie Corridor

When so viewed, it is apparent to us that a grander conception than that proposed by Alberta is needed if national, not merely provincial aspirations, are to be well served. We have in mind the need for an organizational setting to serve as the points of departure for planning, promoting, financing, constructing, operating and administering the great railway which has been found, by a study conducted for the Transportation Development Agency of the Ministry of Transport, by Canalog Logistics, Limited, and Canadian Pacific Consulting Services, Limited, Arctic Oil and Gas By Rail in June, 1976, to be a physically

feasible and economically competitive means for transporting crude oil and liquified natural gas southward from the Arctic. We have intensively reviewed the thirteen volume study of this proposed railway and are most favorably impressed by the breadth of its investigations and the superior quality of its analysis. This $1.5 million study was funded by Transport Canada. Whereas we did not have available to us the resources necessary to review the study in all of its detail, we see no reason to doubt the validity of its ultimate finding that the transport of Arctic Gas and Oil by Rail is completely feasible from both an engineering and a financial perspective.

In the 110 years since Confederation, the nation has evolved as a narrow ribbon of development hugging the border of the United States; the great land mass to the north, comprising by far the preponderant area of our country, has been peripheral to Canada's concerns. Canadian history justifies the opinion that when means are found to commit our resources and our national spirit in a vital and fundamental penetration of this vast and largely undeveloped territory, it will disclose a veritable cornucopia of heretofore undiscovered attractions, a cornucopia which will give force and effect to the northward dimensions which has engaged the national attention in recent years, and a cornucopia which will provide the basis from which Canada's last frontier may evolve, culturally and commercially, in a manner responsive to contemporary expectations.

We see no better means by which to achieve this fundamental penetration than the Arctic Railway which, like the Canadian Pacific Railway

of the past, is proposed at inception for the attainment of specific, and in one sense, narrow goals. But we believe that the Arctic Railway once constructed will, like the Canadian Pacific, fulfill its historic mission by unlocking reserves of Canadian achievement which will far transcend the specific goals to which the proposal is now directed. Arctic railway projects are not unique to Canada. Russia is now building a 2,600 mile arctic rail line in lieu of the projected oil pipe line from Tyumen to Nakhooka.

In its present concept, the Arctic Railway would provide reliable all-year operations over a 916 mile route, linking Enterprise on the Great Slave Lake Railway with a proposed northern terminal near Inuvik in the Mackenzie Delta. Inuvik could become Canada's Arctic Port, available to service the communities along the coast and the Arctic Islands doing what Archangel now does for the north coast of Siberia.

Unlike prior isolated railways in the Yukon and Alaska, this railway would be physically joined to, and would become an integral part of, the continental railway network. Solid unit trains would operate over this route carrying 150 thousand barrels of crude oil in a 40 hour one way trip. Performance capability would be roughly equal to a 48 inch oil pipeline plus a natural gas pipeline of similar size.

The Commission is not insensitive to the high dollar price required to bring this project to fulfillment, a price now estimated to be in the magnitude of between nine and ten billion dollars, being virtually the same price as the proposed Mackenzie Valley Pipeline. We deem the price commensurate with the benefits we foresee, by no means the least

of which involves engaging the hearts, as well as the resources, of all Canadians in the completion of a great national enterprise. We wish to stress that an opening to the north cannot, and will not, depend exclusively on a single mode. Other forms of transportation, highway, waterway, pipeline and air, all will have a role to play in bringing about an effective northern transport system. Our belief is simply that the railway mode is to be preferred as the central facility in a burgeoning development because of its potential for carrying a variety of traffic in both directions and because it lends itself to a minimal and controlled impact on the environment, providing continuous employment in skilled and unskilled categories. It will create a sizeable community at its southern terminus within the Territories.

Given its link to the Great Slave Lake Railway, we see the Arctic Railway as a natural extension to Alberta's proposal for a North West Railway Authority and we therefore recommend, for the reasons already recited, that the ambit of the Northern Development Department encompass not only lines we have already found suitable for ownership and operation by that entity, but the Arctic Railway as well. With such an instrument, difficulties of financing and conflict of interest will be minimized, and costly duplication altogether avoided.

The Commission is not insensitive to the high social responsibility that may be involved in relation to Dene and Inuit land rights and cultures. No project of this kind can be undertaken without the cooperation of the indigenous population following consultations initiated prior to embarking upon actual construction.

The development in the north in which the rights and cultures of native people are respected and fostered can be mutually advantageous to both Canada, as a whole, and the native populations.

The north will change. It is changing now. Development will occur. It is inevitable. It must not, of course, be allowed to occur uncontrolled, but only with the fullest cooperation of the Dene and Inuit. Only in such a millieu will the dream of the North hopefully come to fruition.

CHAPTER 5

PRIMARY ELEVATORS

PRIMARY ELEVATORS

During the hectic period of railway construction on the prairies came a system of buildings designed to receive, store and load grain grown by producers into rail cars. The first facilities were flat wooden warehouses. Producers delivered to them in bags. By 1890, there were 103 of these warehouses across the prairies and by 1900, there were 126. The railways, however, disliked handling grain in bags. As an inducement to switch the grain handling system from bags to bulk, they offered free sites and special priveleges to companies to build beside their tracks, elevators capable of receiving, storing and shipping grain in bulk. The first elevator in Western Canada was built at Gretna Manitoba in 1881. It had a storage capacity of 25 thousand bushels. Elevator construction continued at a rapid pace. There were 90 elevators by 1890, 454 by 1900, and 1,860 by 1910. By this time, flat warehouses had all but phased out. Most of the elevators prior to 1900 were owned by individuals, and were of a capacity of 25 thousand bushels.

During the early 1900's, as the railways developed new territory throughout the West, the growth of elevators continued at an exceptionally fast rate. By 1920, there were 166 elevator companies operating in Western Canada, and by 1935 the grain handling system had reached its peak with 5,728 elevators with a storage capacity of 189.9 million bushels. This industry began to consolidate after the war of 1939-45 and consolidation accelerated as operating costs rose in the 1950's and 1960's and as handlings at isolated points continued to decline.

This downward trend in country elevator services is illustrated by the progressive decline in the number of shipping points and primary elevators serving prairie farmers after 1945, but particularly following 1965.

TABLE V-1
DELIVERY POINTS, ELEVATORS AND ELEVATOR CAPACITY
1935-1976

Year	Delivery Points (No.)	Primary Elevators (No.)	Storage Capacity (millions bushels)
1935	N/A	6,728	189.9
1945	2,113	5,633	287.8
1955	2,083	5,403	334.3
1965	1,983	5,137	381.0
1970	1,907	4,971	399.0
1975	1,556	4,165	355.5
1976	1,495	3,964	343.8

A substantial adjustment in the investment of primary elevators has already taken place by closing some low-volume elevators, by mergers between companies, by elminiating duplications of services and by combining the operation of two or more elevators at one point into a single operating unit under one operator. The 5,403 country elevators at 2,083 delivery points in 1955 were reduced, by 1976,to 3,964 elevators (2,546 "operating units") at 1,495 delivery points. In short, the delivery points were reduced by 28 percent, and the effective elevator "units" providing service were reduced virtually by 53 percent. It may be expected that this consolidation will continue, and be supplemented by construction of larger and more efficient elevators at more strategic locations to serve the farmers.

Yet it should be emphasized that the recent withdrawal of elevator services from nearly 30 percent of the shipping points has not applied just to points on branch lines. These consolidations have applied to the whole primary elevator system covering all rail lines. It may be expected that this universal consolidation will continue. This is because there is a percentage of low volume elevators on basic network rail lines. Thus, it should be expected that the withdrawal of elevator services will continue to be widespread throughout the whole rail system as it has in the past.

Elevator Cost Characteristics

The Commission had two options for obtaining elevator cost information for use in analyzing the implications of alternative rationalization schemes on the elevator system. The first option was to obtain detailed cost information on all or a smaple of primary elevators, while the second was to update one of the existing elevator cost studies and generalize to all areas.

A considerable amount of elevator cost information was obtained from grain companies regarding their elevators located on Category "B" rail lines, and this information has been used in analyzing specific branch lines. However, there was considerable variability in cost accounting procedures among grain companies, and information was lacking for elevators located on basic network lines. Rather than engage in the time consuming and costly exercise (for the Commission and the grain companies) of developing a new data base, the decision was made to update an existing elevator cost study. The Canada Grains Council Area 11 elevator costing study was selected for this purpose. This was

one of the most recent elevator costing studies (1972-73); most of the major grain companies were involved in the study, and all of the elevators in the geographic area were included.

Elevator costs were updated to 1974 rather than 1976 in order to make them comparable with the railway costs developed by the Commission on the Costs of Transporting Grain by Rail and farm trucking costs developed by this Commission.

The remainder of this section deals with elevator operating costs and how these costs are influenced by category of rail line, licensed capacity and receipts. The section concludes with some estimates of current elevator construction costs.

Average Elevator Operating Costs

The 1974 average elevator operating costs for 291 manager units in Area 11* are presented in Table V-2, along with the adjustment factors for updating the 1972-73 costs. The average elevator had a licensed capacity of 150,759 bushels and average receipts of 435,448 bushels (1972-73 crop year) for a handling capacity ratio of 2.89. The operating cost per manager unit was $56,903, or 13.1 cents per bushel. Variable costs, as defined in the Area 11 study, accounted for 59 percent, fixed costs for 24 percent, and administration costs for 17 percent. Labour costs were the largest single cost item - 27 percent of total costs.

Category of Rail Line

Average elevator operating costs are also presented in Table V-2

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* Corresponds to Commission Area 11 in West Central Saskatchewan and East Central Alberta.

TABLE V-2

Average Elevator Operating Costs 1974*

	ALL ELEVATORS		ELEVATORS ON BASIC NETWORK		ELEVATORS ON CATEGORY B LINES	
PHYSICAL CHARACTERISTICS						
Number of Elevators	291		161		130	
Average capacity (bushels)	150,759		157,628		142,252	
Average receipts (bushels) Crop Year 1972-73	435,448		448,392		419,417	
Handling/capacity ratio	2.89		2.84		2.95	
OPERATING COSTS**						
I. Variable Costs	$/manager unit	¢/bushel	$/manager unit	¢/bushel	$/manager unit	¢/bushel
-- Labour	$15,514		$16,287		$14,557	
-- Interest on current operating capital	11,947		12,304		11,506	
-- Other variable costs	5,903		6,136		5,615	
-- Total Variable costs	$33,364	7.7	$34,727	7.7	$31,678	7.6
II. Fixed Costs						
-- Site Rental, taxes, insurance	4,772		5,372		4,027	
-- Depreciation	4,504		5,506		3,262	
-- Interest on investment	4,071		5,010		2,908	
-- Total fixed costs	$13,347	3.1	$15,888	3.5	$10,197	2.4
III. Administration Costs	10,192	2.3	10,582	2.4	9,710	2.3
IV. TOTAL COSTS	$56,903	13.1	$61,197	13.6	$51,585	12.3

* Based on updated costs from Canada Grains Council Area II Study of 291 manager units in 1972-73. The adjustment factors used by the Canada Grains Council in updating to 1974 were:
labour - 1.146; interest on current operating capital - 1.585; other variable costs - 1.352; rent, taxes, and insurance - 1.352; depreciation - 1.239; interest on investment - 1.585; and administration costs - 1.146

** Cost components are defined in CGC Area II Study.

for the 161 manager units located on basic network rail lines and for the 130 manager units on "Category B" rail lines. The licensed capacity of elevators of basic network lines was larger than on "Category B" lines (157,628 bushels vs. 142,252 bushels), but the handling/capacity ratio was greater on "Category B" lines (2.95 vs. 2.84).

Elevator operating costs per manager unit on the basic network were $61,197 or 13.6 cents per bushel, compared to $51,585 or 12.3 cents per bushel on"Category B" lines. The major difference is due to higher fixed costs for the elevators on the basic network lines. Variable costs per bushel are almost identical for elevators on both categories of line.

Licensed Capacity

Elevator operating costs and characteristics were stratified according to licensed capacity and category of rail lines (Table V-3) The relationship between average elevator operating costs and elevator receipts (for various licensed capacity levels) is shown in Figure V-1. A number of relationships are evident when we examine this information:

1) As licensed capacity increases, costs per manager unit increase, but average cost per bushel decreases. This relationship holds for elevators located on the basic network lines, but not for elevators on "Category B" lines. The explanation for this is that the handling capacity ratio is much larger for smaller elevators on "Category B" lines.

2) As licensed capacity increases, the volume of grain handled must also increase if unit costs are to remain the same or decrease. Given the trend towards larger capacity elevators, it is particularly important for the grain company to increase its throughput. For example, if the average receipts of about 450 thousand

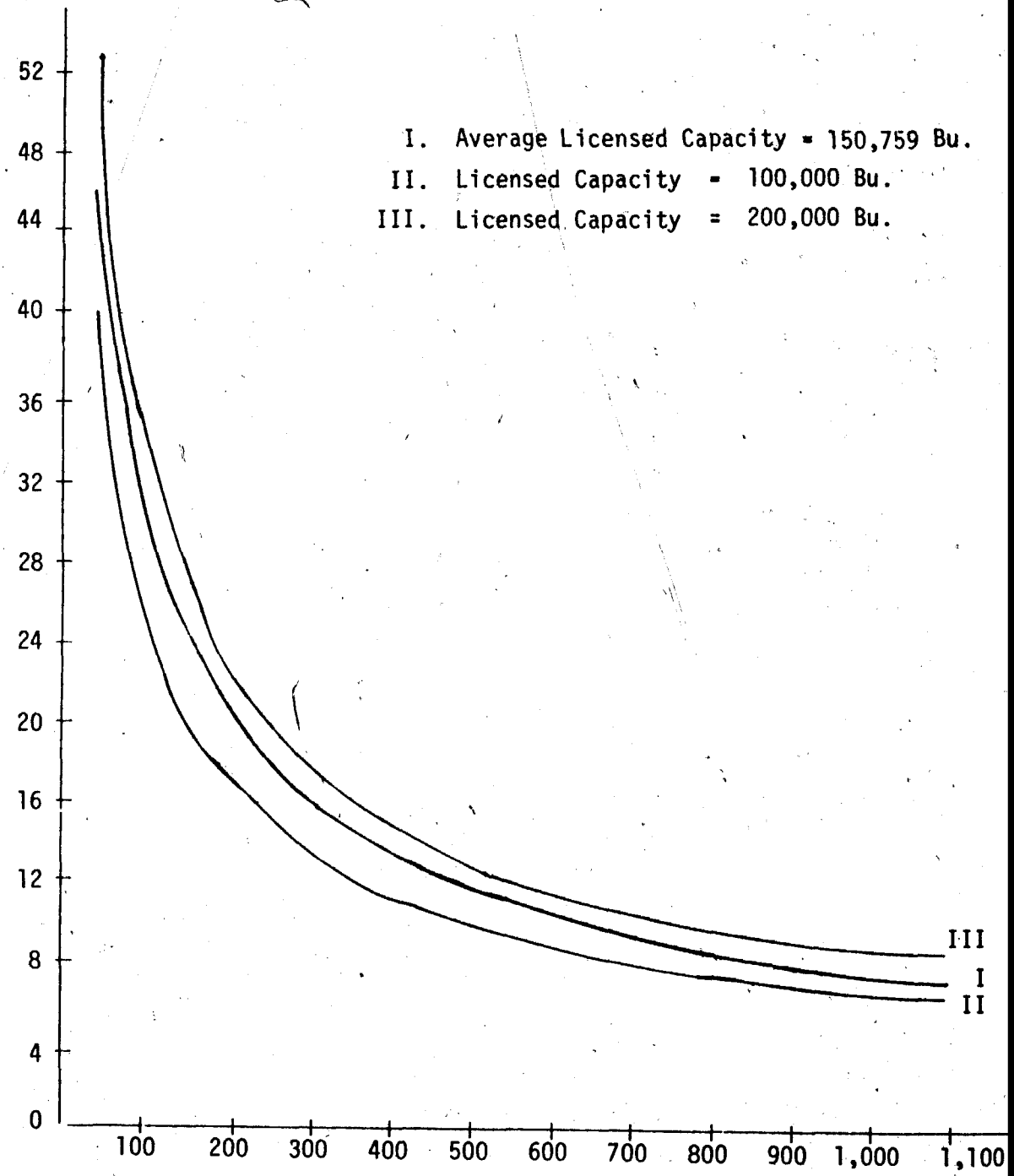
TABLE V-3

Average Elevator Operating Costs, 1974, Stratified By Licensed Capacity and Category of Rail Line

Capacity Range (bushels)	No. of Manager Units	Average Capacity (bushels)	Average Receipts 1972-73 (bushels)	Handling/ Capacity Ratio	Average Total Cost/Bushel(Cents)	Total Costs/ Manager Unit
0 - 49,999						
All Elevators	6	38,267	102,049	2.67	21.1	$ 21,532
Basic Network	3	40,000	67,819	1.70	37.8	25,636
Category B	3	37,667	181,000	4.81	11.4	20,634
50,000 - 99,999						
All Elevators	76	79,083	258,241	3.27	15.6	40,286
Basic Network	37	79,170	240,072	3.03	18.0	43,213
Category B	39	79,000	275,479	3.[illegible]	13.4	36,914
100,000 - 149,999						
All Elevators	92	121,394	355,007	2.93	16.1	57,156
Basic Network	53	118,806	339,479	2.86	17.4	59,069
Category B	39	124,910	376,109	3.01	14.4	54,160
150,000 - 199,999						
All Elevators	53	170,955	513,429	3.00	14.5	74,447
Basic Network	30	171,897	507,431	2.95	15.9	80,682
Category B	23	169,726	521,252	3.07	12.7	66,199
200,000 - 249,999						
All Elevators	35	224,666	597,970	2.66	13.7	81,922
Basic Network	20	223,425	602,079	2.69	14.5	87,301
Category B	15	226,320	592,492	2.62	12.6	74,654
250,000 and over						
All elevators	29	332,600	880,732	2.65	13.3	117,137
Basic Network	18	355,928	991,564	2.79	13.2	130,886
Category B	11	284,427	699,371	2.46	13.4	93,716

FIGURE V-1

Relationship Between Average Elevator Operating Costs and Receipts for Various Levels of Licensed Capacity



bushels were handled by three different sized elevators (100 thousand bushels, 150 thousand bushels and 200 thousand bushels), the average cost per bushel would be approximately 11 cents, 13.5 cents and 15 cents respectively.

Elevator Receipts

Elevator operating costs and characteristics were also stratified according to elevator receipts and category of rail line (Table V-4). A number of important relationships can be seen from Table V-4 and Figure V-1:

1) As elevator receipts increase, costs per manager unit increase, but average costs per bushel decrease. This relationship holds for elevators located on both categories of rail lines, except for four elevators on B lines handling more than one million bushels where unit costs increase slightly.

2) As elevator receipts increase for a given size of elevator, average cost per bushel decreases. At first, the decrease is quite marked, but as receipts increase, it tends to level out. For example, if an average sized elevator of about 150 thousand bushels were to handle 150 thousand bushels, 300 thousand bushels, 450 thousand bushels and 600 thousand bushels, the average cost per bushel would be about 25 cents, 17 cents, 13 cents and 11 cents respectively. Thus, as smaller, low volume elevators are closed out and the grain is diverted to remaining elevators, the grain companies stand to benefit in two ways: smaller higher cost elevators are eliminated, and the remaining elevators can be operated at lower unit costs per bushel.

New Elevator Construction Costs

Grain companies were asked to provide estimates of 1976 elevator construction costs for different capacities and types of elevators.

TABLE V-4

Average Elevator Operating Costs, 1974, Stratified by Elevator Receipts and Category of Rail Line

Receipts Range (Bushels)	No. of Manager Units	Average Receipts 1972-73 (bushels)	Average Capacity (bushels)	Handling/Capacity Ratio	Average Total Cost/Bushel(¢)	Total Costs Manager Uni
0 - 99,999						
All Elevators	10	71,301	85,700	0.83	36.0	$ 25,668
Basic Network	8	69,377	81,750	0.85	37.6	26,086
Category B	2	78,098	101,500	0.78	29.8	23,541
100,000 - 199,999						
All Elevators	44	156,498	96,132	1.63	22.3	34,899
Basic Network	28	156,901	97,189	1.61	24.6	38,598
Category B	16	155,793	94,281	1.65	18.2	28,354
200,000 - 299,999						
All Elevators	59	250,981	114,176	2.20	15.0	37,647
Basic Network	31	251,058	122,013	2.06	16.3	40,922
Category B	28	250,896	105,500	2.38	13.6	34,122
300,000 - 399,999						
All Elevators	44	352,466	123,375	2.86	13.7	48,288
Basic Network	20	362,907	137,375	2.64	14.7	53,347
Category B	24	343,766	111,708	3.08	12.9	44,346
400,000 - 499,999						
All Elevators	36	447,887	168,053	2.67	13.2	59,121
Basic Network	16	455,497	161,100	2.83	13.6	61,948
Category B	20	441,798	173,615	2.54	12.9	56,992
500,000 - 599,999						
All Elevators	38	548,698	168,316	3.26	12.8	70,233
Basic Network	21	549,222	163,810	3.35	13.2	72,497
Category B	17	548,051	173,882	3.15	12.2	66,862
600,000 - 749,999						
All Elevators	27	675,197	204,093	3.31	12.0	81,024
Basic Network	17	682,767	206,859	3.30	12.4	84,663
Category B	10	662,327	199,390	3.32	11.2	74,181
750,000 - 999,999						
All Elevators	20	840,550	212,300	3.96	10.4	87,417
Basic Network	11	847,809	224,818	3.77	10.9	92,422
Category B	9	831,556	197,000	4.22	9.8	81,492
1,000,000 and over						
All Elevators	13	1,291,072	339,746	3.80	10.8	139,436
Basic Network	9	1,382,891	385,078	3.59	10.9	150,735
Category B	4	1,084,480	237,750	4.56	10.6	114,955

On the basis of these estimates, it is possible to show that as capacity of elevators increases, the construction costs per bushel decrease. It should be noted that all grain companies do not build the same type of elevators, and the cost per bushel of capacity can vary quite substantially. Some typical sizes and cost ranges are listed below:

100,000 bushel capacity	$3.50 - $5.20 per bushel
150,000 bushel capacity	2.80 - 5.00 per bushel
200,000 bushel capacity	2.60 - 4.25 per bushel
250,000 bushel capacity	2.40 - 3.90 per bushel

Elevator Sites

Grain companies are experiencing increasing difficulty in obtaining satisfactory building sites for the construction of primary elevators.

Originally elevator companies were granted sites on railway right-of-way for the construction of warehouses and of elevators. Currently, in the case of CP Rail, the railway company dictates the site at which elevator companies are permitted to build, then the site is sold to the elevator company by Marathon Realty. The price asked for this property is often exorbitant and the location is not always desirable. The elevator company is then responsible for site improvement and for the cost of the spur or siding which is built by CP Rail according to CP Rail specifications, and in accordance with CP Rail costing. Following construction of the spur, CP Rail charge a maintenance fee to keep the spur operable. The Commission did not hear of similar complaints about Canadian National.

The Commission is of the opinion that upon acceptance of the

principle of compensatory rates that a negotiated lease, approved by the Canadian Grain Commission for the serviced site, should be the practice.

The Commission recommends that the elevator company should have the option to purchase or to lease elevator site and sidings from the railway at a rate approved by the Canadian Grain Commission. If the parties are unable to agree on the terms of sale or rental, either may appeal to the Canadian Grain Commission which will arbitrate the dispute and whose findings should be final.

Off-Line Elevators

There are points on lines scheduled for abandonment where the volume of grain combined with the distance to an alternative delivery point makes it imperative that producers in those areas not be left in an impossible position. Being on rail provides the means whereby grain is carried from the elevator to a main line and thence to export position.

If an alternate means can be suggested that is much less expensive than maintaining the rail line - it should at least be carefully studied - the Commission has done so.

If the cost of rehabilitating and maintaining a line would be prohibitive - what then is the solution? Of the various alternatives, the one that offers the best solution to the producer, in

economic terms, is the off-line elevator.

It is not a matter of building an elevator where no railway exists (although that may be the only solution in rare cases) but rather retaining an elevator in operation when the line is about to be abandoned. The elevator will continue to operate in exactly the same way as when the line was there insofar as the producer is concerned. The producer will get the same service at no extra cost.

Off-line elevators were tried at three locations in the past and were not successful, because the producer who patronized the elevator had to pay extra for doing so. Consequently the producer concluded it was as economical to haul his grain to an elevator on-line, with no extra elevation charge, as it was to haul to the nearer one where he had to pay the extra charges.

These extra costs should, we recommend, be borne by the Federal Government. The justification for this form of subsidy is that if the line is kept in operation to serve the elevator, the cost of keeping it there would be many times greater than the extra elevation and trucking costs. This is illustrated by costs presented in Chapter 10.

Throughout the review of railway branch lines, the Commission had been conscious of a variety of factors which contribute to or detract from the viability of a particular line. Elsewhere in this report the Commission defines viability in the broad sense and provides some insight into the criteria used in an attempt to objectively rank one line with respect to another. The Commission computed the viability of each line in terms of very diverse criteria which included social as well as economic benefits. A number of rail lines which would be

relatively expensive to maintain in terms of cost of service per unit of output have not been specifically recommended for abandonment.

In some cases, it is expected that a line will be more viable at some point in the future due to further development, however, in certain areas an ongoing review will likely demonstrate that retention of service by rail is not economical. In looking at western agriculture and the grain collection system across the prairies, the Commission has become aware of the desirability of continuing to service primary receiving facilities at some points where forwarding by rail is not economical. There should be provision for the operation of "off-line elevators" to satisfy this need.

The Commission has assessed the economics of forwarding grain by commercial truck from some of the areas where the retention of rail appears to be uneconomical. The off-line operation of an elevator as envisioned with trucking from the primary receiving point involves a second handling at the "on-line elevator" or "rail-head".

The off-line elevator operation can be viewed as a means of facilitating the maintenance of grain delivery in a locale at a considerable saving as compared to retention of rail service. The Prairie Rail Authority would be responsible for approving the licensing of an elevator in this mode of operation upon application by a grain company. Approval to operate an elevator off-line would commit the Prairie Rail Authority to payment of commercial trucking costs from the local point to an on-line elevator or transloading facility, and the costs of the second handling of grain at the on-line point. Co-ordination of car

orders at the on-line point and commercial trucking would be a joint responsibility of the railway companies, grain companies and the Wheat Board. Approved trucking routes would take into account the shortest distance and optimum roads. In some cases, it is expected that grain companies will dedicate an older facility exclusively to transloading.

The Commission holds the view that provision for the liberal application of off-line elevator operation will help to create a real understanding of the underlying economies and issues. This provision will not result in a proliferation of off-line elevators and high total cost to the system for trucking and transloading; on the contrary, it will allow for more orderly rationalization by shifting the focus away from rail lines and allowing the industry to view the grain receiving and transportation elements as equal status determinants of system configuration. Thus, the Commission recommends that the Prairie Rail Authority should generally approve grain handling company applications for off-line elevator operation.

The Commission has identified certain likely characteristics of "off-line elevator" points. The following three descriptions encompass the situations in which the Commission foresees the operation of primary grain receiving and forwarding facilities "off-line":

1. "Transitional Operation"

Where immediate abandonment of rail service is recommended, there may be justification for continuing operation of elevators because of a significant increase in hauling distance combined with relatively efficient present elevator operation at the point.

2. "Continuing Operation"

The present configuration of rail lines includes some very low volume branch lines which, nevertheless, do provide service to relatively remote and productive pockets of territory. Analysis of the economics of grain transportation leads to the conclusion that it is not feasible to continue servicing such points by rail.

3. "Frontier Operation"

Transportation has been used as a tool in the development of production throughout the settlement of Western Canada. Traditionally, railways are viewed as the major mode of transportation in this "frontier" context.

With the availability of modern clearing and road building machinery, it would appear that even in the more rugged terrain and climates of today's frontier zones, such as Northwestern Alberta, agricultural development tends to lead rather than lag railway service.

An off-line elevator could be kept in an already established community. In this way the community would not suffer a tax loss. Producers, who were in the habit of delivering to that elevator could continue to patronize the local merchants, etc. There would be some extra use of the highway to the nearest point on rail. The Commission recognizes this and recommends that some

compensation for this incremental traffic be paid to the Province to cover the cost of road maintenance for this additional traffic. On the assumption that the off-line elevator handled approximately 300 thousand bushels per year, this would mean about 375 truck loads of 800 bushels per load in a 12 month period. Producers generally deliver grain in six of the twelve months. This would mean about 60 round trips per month, - two to four at the most on any given day, with trucking likely to be done by a local trucker.

The Commission recommends that:

-- With the abandonment of the Inwood subdivision (Region 3) the elevator at Fisher Branch, Manitoba be set up as an "off-line" elevator, with grain trucked to Arborg, Manitoba;

-- the Federal Government, through the Prairie Rail Authority, pay the costs of commercial trucking between Fisher Branch and Arborg and negotiate with the operator of the elevator at Arborg to establish a tariff for the extra costs of the second handle at that location.

-- The elevator companies and the Prairie Rail Authority examine the opportunities to establish like operations at other locations with priority given to studies of off-track elevators at Cremona, Alberta; and Gronlid, Waldheim, Arelee, Stewart Valley and Main Centre, Saskatchewan.

Primary and Terminal Elevator Tariffs

The matter of variable handling tariffs at primary elevators was discussed frequently at both local and regional hearings. The majority of farm opinion was that the present system of providing flexibility below the Canadian Grain Commission approved maximum tariff was satisfactory. There does, however, appear to be a considerable amount of misunderstanding about the various tariffs levied, both

hidden and published. The part played by screenings in providing operating revenue in lieu of higher tariff levels is not understood by most producers.

The generation of additional grain handling revenues through blending is also not well understood although it appears to be recognized by most farmers that over regulation of this area of grain handling could be contrary to good merchandizing practice and detrimental to producer returns.

The Commission is concerned about the producer's general lack of knowledge of actual marketing costs even though their total marketing costs may be equivalent to 10 to 20 percent of the price of grain.

The Commission recommends that:

-- The Canadian Grain Commission develop a standardized costing system for use by both the primary and terminal elevator system. Such accounting methods to be structured to ascertain separately the costs of cleaning, handling, storage and drying of grains.

-- Operators of primary elevators and terminals be required to report costs on a regular basis to the Commission for purposes of monitoring such costs and determining tariff levels.

-- Elevator companies be required to show the applicable tariffs for handling, cleaning, storage and freight on the producer's cash ticket.

Overbuilding and Closing of Primary Elevators

As detailed elsewhere in this report, the number of primary elevators was reduced from 5,728 in 1935 to 3,964 in 1976, through consolidation of the system by closures, purchases and amalgamations.

1976 saw a new development with the construction of larger

throughput elevators at Weyburn, Rosetown and Elm Creek. Two similar elevators are projected for Rockyford and Champion in Alberta. The Wheat Pools are building larger elevators in the range of 140 thousand to 160 thousand bushel storage capacity. United Grain Growers are building an even larger unit, 340 thousand bushels, at Dawson Creek. A new concept in elevator construction is being planned by Peace Agra Ltd. at Fairview, Alberta with satellite storage in adjacent communities.

Nevertheless the trend is definitely toward an even lesser number of primary elevators, regardless of what lines are retained or abandoned. The new primary high-throughput elevators will be spaced further apart - about 25 to 30 miles - than has been the situation to this time when primary elevators were located about 8 to 10 miles apart. The economics of the industry are dictating this change. This means that many communities in the 25 to 30 mile gap between delivery points will be without primary elevators. This will be the case even where the rail line remains. In this situation, there is going to be a temptation for competitor grain companies to locate within the gap. If this occurs, the economics of the larger elevator units will be endangered, and the gathering system will become over-built and overserviced. Any excess building will naturally be at the expense of the producer, particularly members of the farmer owned grain companies, for it is their money that will be at risk.

The possibility of overbuilding was discussed on many occasions. The Commission was looking for the reaction of producers. No clear concensus emerged. When asked if some measure of control was desirable

the response was generally in the negative from producers and grain companies alike. Most seemed impressed with the desire for more competition, even though additional competitive facilities would add to the producers' costs. It was evident that many of the younger and successful producers were unaware of the chaotic conditions that prevailed under the guise of competition in the early 1920's when there were 166 primary elevator companies operating.

Some expansion will necessarily be required. It is only unrestrained expansion that is to be feared. Competition at all delivery points is neither essential nor economical. Competition between delivery points will accomplish the same ends at a much lesser cost.

The Commission recommends that:

-- On rail lines under the jurisdiction of the Prairie Rail Authority -

a) that elevator companies seeking to expand or build new plants first obtain the approval of the Authority;

b) that elevator companies desiring to close an elevator file notice with the Authority and post such notice in the elevator for the information of their customers 12 months prior to the scheduled closing date.

-- On the Basic Network lines -

a) that the Canadian Grain Commission and the elevator industry study this problem and develop an approach which will prevent overbuilding and undue competition in some areas and underservicing and a lack of competition in others.

Cleaning of Grain - Screenings

Considerable discussion ensued at some hearings regarding the cleaning of grain and the use of screenings. This is quite natural since screenings can denote "junk" to some grain farmers; cheap feed to some livestock feeders; a hidden grain company tariff to others; and a profit opportunity to others. However the cleaning of grain and the disposal of screenings are viewed, they represent a major factor in Western Canada's grain handling system. On the average one out of every forty cars of grain shipped is screenings. Whether this represents a loss of cheap feed to the prairie livestock producer or a windfall to the grain companies is open to question.

Screenings result from the removal of foreign materials from delivered grain to permit grain to meet the standards of purity established for various grades. Upon delivery of grain to the primary elevator a dockage assessment is established. In effect this dockage represents the percentage of a given delivery which is screenings. Farmers are paid on the basis of clean grain therefore the screenings are in effect free to the grain company. Naturally the grain companies wish to maximize the profits realized from the disposal of this product. To do so the grain companies carry out the separation of the screenings from the grain where it can be done at least cost. Cleaning is highly volume related therefore it has been done historically at the terminals. With the majority of the company owned terminals located on water this cleaning takes place at Vancouver and Thunder Bay.

It should be noted that the cost per bushel of cleaning at ordinary country elevators is nearly double the cost of cleaning at a terminal with two million bushels or more of annual cleaning capacity. In addition, there are problems at primary elevators of a lack of experienced labour, shortage of binning for various screening grades, insufficient quarters for car lots of various grades, etc.

The total cost of screenings to the companies is the cost of shipment to port at statutory rates plus the cost of cleaning, segregating and in the case of refuse screenings, pelleting. The average transportation rate is approximately $4.00 per ton, cleaning costs approximately $2.00 per ton and pelleting costs $10.00 per ton. At selling prices in Vancouver of $70 to $95 per ton this represents a good return to the grain companies. Screenings, whether as a separate commodity or as a part of a grain shipment are transported by rail at the statutory rate to Thunder Bay or Vancouver. The exception is screenings which are sold out of Vancouver terminals for domestic utilization in British Columbia, which are assessed domestic rates. Screenings shipped from these same terminals to the United States however, are assessed the export rate. This gives the United States buyer an unfair advantage.

Screenings are separated into various grades. From 5 to 20 percent may be recovered as whole grain through the cleaning process. Of the remainder, 20 percent are recovered #1 feed screenings consisting primarily of cracked grain and buckwheat. Approximately 12 percent is mixed feed oats and the remaining 68 percent which consist

primarily of small seeds and dust, is known as refuse screenings. Approximately 95 percent of #1 feed screenings are consumed domestically while over 90 percent of refuse screenings are exported.

Current Production and Utilization of Prairie Screenings

- Production - 800 thousand tons - 28 million bushels.
- Recovered as grain - 104 thousand tons - 3.6 million bushels sold as grain by the grain companies.
- #1 screenings - 139 thousand tons - 4.9 million bushels - 95 percent to domestic market.
- Mixed feed oats - 83.5 thousand tons - 2.9 million bushels - export and domestic markets.
- Refuse screenings - 473 thousand tons - 90 percent export market.

These screenings could be utilized on the prairies for livestock feed; the #1 screenings as poultry and swine feeds and the remainder for cattle. The economics of doing so will vary from time to time depending on the relative prices of feed grains versus screenings.

Screenings represent a large quantity of product, the 28 million bushels produced is equivalent to the total record Churchill throughput of 1976. These are hauled from the prairies at a cost to the transportation system and represent no return to the producer except as an unknown reduction in handling tariffs and as patronage dividends. The interior government terminal elevators at Moose Jaw, Saskatoon, Edmonton, Lethbridge and Calgary have a combined cleaning capacity of 205 million bushels per year. These facilities are in place and it is a waste of existing resources if they are not fully utilized.

It is acknowledged that extensive use of these terminals would result in some loss of revenue to the grain handling companies. However, it is the economics of the total system which is of primary importance and in the long term interests of all producers. Maximum benefits can only be achieved if total operations are carried out at minimum cost. This should include the interior government terminal elevators on the prairies where the alternative screening markets either export or domestic can be fully exploited.

There are times when some grades of screenings can be best used on prairies and others shipped to export. When cleaning is carried out on the prairies the market alternatives are broadened. The fact that cleaning can currently be done at interior government terminal elevators is important in that these are already in place. Eighty-five percent of the screenings produced at these terminals are sold into local prairie markets substantiating the claim made by many that prairie markets do in fact now exist for screenings.

There is a requirement for increased economic opportunity in Western Canada. One of the opportunities manifests itself in the further processing of agricultural commodities through cleaning of grain. A further opportunity presents itself through the provision of cheaper feed alternatives for livestock.

All of these 800 thousand tons of screenings could be used on the prairies for feed. It is in the interests of both the grain producer and the livestock producer to see that screenings be more readily available on the prairies. As long as most cleaning is done

at Vancouver and Thunder Bay, these opportunities are denied to prairie livestock and grain producers. On the other hand if cleaning is done on the prairies all options are open.

Currently the export market at Vancouver largely determines the price for the refuse screenings. Approximately 50 percent of the screenings produced in Canada are refuse. The 473 thousand tons which this represents could easily be fed on the prairies; however, cleaning economics and demand, will dictate when that will be. As long as the export price for refuse screenings is high relative to alternate feeds available on the prairies, it will probably continue to be profitable to export refuse screenings through the West Coast.

There is no "close-by" domestic market for screenings at Prince Rupert and Churchill and there is a very limited local market at Thunder Bay. For exports all three of these ports are at a disadvantage compared to Vancouver. Historically, the Thunder Bay price for refuse screenings is constantly lower than at Vancouver. The main market for Thunder Bay "refuse" screenings is Britain. The pending European Common Market tariffs may render this market even less attractive.

Summary

1. Screenings represent approximately 2.5 percent of all grain delivered, or 28 million bushels.

2. Screenings are dockage and the producer is not paid for them. They accrue to the grain handling agency free at point of delivery.

3. The cost of screenings to the grain company is the cost of separating them from the grain, the cost of transportation at statutory rates and cost of marketing, i.e. pelleting, handling, administration of sales, etc.

4. Of the screenings delivered, approximately 13 percent (104 thousand tons or 3.6 million bushels) is recovered and sold as whole grain. Of the remaining 87 percent:

   - 20 percent or 139 thousand tons represents #1 feed screenings;
   - 12 percent or 83.5 thousand tons mixed feed oats;
   - 68 percent or 473 thousand tons refuse screenings.

5. Screenings are sold wherever the most profit can be realized. Currently this is domestically for #1 screenings and export for refuse screenings.

6. All of the screenings produced in Western Canada could be utilized in Western Canada for livestock feed.

7. The screenings will be used for feed on the prairies when available and economics dictate.

8. In light of the alternatives presented, the cleaning of grain at inland facilities equipped to do so appears to offer the greatest flexibility in exploiting of market opportunities.

Western grain and livestock producers are in an improved position and will realize maximum returns if grain cleaning is carried out at a location with free access to all markets.

Screenings now constitute a hidden tariff as far as the grain producer is concerned. This should not be so.

Costing procedures should be developed by the Canadian Grain Commission which are uniform in application across the grain handling system. Specific costs and margins for all operations should be clearly identified. Specific tariffs should be established on the basis of these costs. To do otherwise distorts handling economics and masks the true costs of doing business.

CHAPTER 6

THE RAILWAY SYSTEM

THE RAILWAY SYSTEM

The transport of large quantities of grain, produced on the prairies, over the long distances necessary to bring it to export position at seaboard, is a sizeable transportation function. There are approximately 21,500 miles of rail network used in moving grain from the primary elevator points to export position.

The responsibility for the physical allocation of motive power and grain cars rests with the railways. This operation is complicated by the seasonal shifts in grain movement, particularly to Eastern Canada. Typical is the rail movement of grain from the Georgian Bay Ports to the Atlantic Ports each winter, requiring the transfer of adequate power and equipment from the West, but at the same time sufficient equipment must be left in the West to maintain the heavy year-round movement to the West Coast, and to fill the Thunder Bay Terminal Elevators preparatory to the opening of navigation in the spring.

Shipping Blocks

For purposes of co-ordinating railway grain transportation, the railway network on the prairies is divided into 48 segments. Each is known as a shipping block. There are 25 blocks on the Canadian National, 20 blocks on CP Rail, 2 on Northern Alberta Railways, and one on the Great Slave Lake Railway. A block is a grouping of railway train runs established so that a railway can, within a block, provide flexible train service from week to week, to the various branch lines. There may be two shipping blocks in one geographical area, one for CP Rail and one for Canadian National.

A typical shipping block includes about 40 delivery points with some 125 elevators. The block is designed so that companies operating elevators have some flexibility in placing shipping orders. There are three to sixteen train runs in a shipping block. In the planning of train runs the various factors taken into account include, minimum and maximum number of cars, car spotting, capacity of elevators, available stock of equipment, scheduled vessel arrivals, volume of grain enroute, amount of grain required and the rate of unload of cars at the terminals. The Canadian Wheat Board advises grain companies of the number of shipping orders it may distribute in each block the following week. The grain company allocates these orders to the individual primary elevator.

Movement of Rail Equipment

The railways ability to have empty cars in the numbers required at the proper distribution points is dependent upon the rate of unloads at terminal elevators. Cars unloaded at the terminal elevator should return to the primary elevator system for reloading without delay. A low rate of terminal unloading, because of terminal congestion or other reasons, affects the reloading capability of the system some days later. The movement of both empty cars and loaded cars is a complex exercise in logistics, and one which demands constant and careful supervision.

Equipment returning from terminal elevators, at Thunder Bay and the West Coast, is moved to main classification yards of each railway. Calgary and Winnipeg are the main classification yards

for CP Rail, and Edmonton and Winnipeg for Canadian National Railways. From these main classification yards trains of empties are directed to distribution yards in the quantities required for the Canadian Wheat Board shipping program to make up the various train runs which branch out from these yards. Distribution yards are located at centers such as Winnipeg, Brandon, Souris, Regina, Moose Jaw, Biggar, Saskatoon, Calgary, Edmonton, Hanna and Medicine Hat. Upon arrival at these distribution yards, empties are marshalled into the required numbers to match train runs for the various shipping blocks. Generally the distribution points are where train and engine crews are based.

There are a total of four main classification yards, 22 distribution yards and 113 subdivisions involved in the Western Canadian grain movement.

At Terminal Ports

Export grain from primary elevators moves principally to 4 Canadian ports, Thunder Bay and Vancouver, served by both CP Rail and Canadian National Railways, Prince Rupert and Churchill served exclusively by Canadian National. Located at these ports are 23 terminal elevators, 17 at Thunder Bay, 4 at Vancouver, and one each at Prince Rupert and Churchill. At Thunder Bay and Vancouver, while certain elevators are switched exclusively by one railway or the other, carloads from both railways have access to all elevators through car exchange agreements. The same is not true at Prince Rupert or Churchill. Grain originating on CP Rail

lines is not shipped to these two ports, despite the existence of physical interchange tracks at many common rail points.

Railway Equipment

-- CP Rail

CP Rail has nine thousand, 50 and 60 ton, 40 foot standard box cars which are used solely for the movement of grain. Additionally, there are 11 thousand 60 ton six foot door, 40 foot standard box cars which potentially could be used to haul grain. The percentage of these cars in grain traffic varies over time, although some are always involved in grain movements. There are 1,200 - 60 ton box cars with roof hatches designed to haul potash. They can be used for grain movements during periods of low potash and high grain requirements.

CP Rail's covered hopper fleet (excluding government owned equipment) is presently about seven thousand units. On the average, about 500 of these units are employed in the grain trade. This varies between 100 and 1,500 depending on potash movement requirements.

CP Rail received 3,202 government owned covered hopper cars a few years ago and will receive more than one thousand in an order recently placed with the car builders. These 100 ton steel cars are required to be used in movement of grain west of Thunder Bay.

The minimum and maximum availability of equipment at present for the haulage of grain by CP Rail is as shown in the following table.

TABLE VI-1

CP Rail Car Inventory

Equipment	Minimum		Maximum	
	# of Units	Capacity (tons)	# of Units	Capacity (tons)
-50 & 60 ton Box Cars	9,000	490,000	9,000	490,000
-CP owned covered hopper cars (average)	500	46,000	500	46,000
Forestry Cars			11,000	660,000
Potash Cars			1,200	22,000
Sub Totals	9,500	536,000	21,700	1,268,000
-Gov't owned covered hoppers - on hand	3,202	320,200	3,202	320,200
TOTALS	12,702	856,200	24,902	1,588,200

-- Canadian National

Canadian National had 11,600 standard box cars in 1974 which were available for transporting grain. This includes approximately four thousand standard box cars normally used in moving forest products. These cars can also be used to haul grain and some are used when the demand by the lumber industry slackens.

Canadian National's covered hopper fleet consists of about 9,600 units. None of these units are assigned exclusively to the grain trade. However, as fertilizer and potash demand usually slackens during the summer season, as many as one thousand of these covered hopper cars are used to haul grain during this period. In addition, the Federal

Government has provided Canadian National 2,798 covered hopper cars and will supply approximately one thousand more later this year (approximately 1,600 of these government owned hopper cars are 90 ton aluminum cars; the balance, 100 ton steel). These are for use exclusively in the movement of grain west of Thunder Bay. The latest order consists of 824 - 70 ton aluminum cars which can be used on the lighter weight lines on the prairies.

To summarize, the minimum and maximum availability of equipment for the transport of grain by Canadian National is:

TABLE VI-2
Canadian National Car Inventory

Equipment	Minimum		Maximum	
	# of Units	Capacity (tons)	# of Units	Capacity (tons)
40' Box Cars	7,600	418,000	11,600	638,000
-CN owned covered hoppers (average)	0	0	1,000	100,000
Sub Total	7,600	418,000	12,600	738,000
-Gov't owned hopper cars (on hand)	2,798	263,800	2,798	263,800
TOTAL	10,398	681,800	15,398	1,001,800

Future of the 40 Foot Standard Box Car

No 40 foot standard box cars have been purchased by the Canadian National or CP Rail during the past fifteen years. CP Rail purchased 500 in 1962, and Canadian National purchased one thousand in 1957.

In recent years, both railways have been acquiring 50 foot box

cars and covered hopper cars. As these cars are added to the system, old 40 foot standard box cars are retired from service. Thus, the number of 40 foot standard box cars for grain service has been declining in total.

In 1973 the Federal Government undertook a box car repair program. Total cost of this program was $3.3 million. Unlike the branch line subsidy program which is a continuing program, the payment to the railways by the Federal Government for the rehabilitation of specific box cars which were to be used exclusively for the carriage of grain was a one-time program. Under this program, the Government paid for one-half of the total repair costs on one thousand CP Rail cars and on 1,400 Canadian National cars. In effect, the Federal Government put 500 CP Rail cars and 700 Canadian National cars in grain service.

Hopper Cars

The Federal Government recently announced the purchase of an additional two thousand covered hopper cars to add to the grain fleet. This will bring the total number of government hopper cars in service to eight thousand.

This latest purchase was made to assist the Canadian car manufacturers, which are facing slowdowns, to maintain employment in their plants in Eastern Canada. This program, said to cost $90 million must not be regarded as a subsidy to western producers. These cars are not now needed in the western fleet, but the program can be justified because they could be needed in the future.

CP Rail will receive slightly more than half of the two thousand cars on order. These will all be 100 ton steel cars. Canadian National will receive 824 - 70 ton aluminum cars and the balance as 100 ton steel cars. These smaller cars will be able to operate on the lighter lines, those with a gross carrying capacity of 177 thousand pounds. The Commission is of the view that the cost of rehabilitating or upgrading the lighter capacity rail lines far outweighs the costs of providing lighter equipment for these lines. With the 70 ton car, primary elevators on these lighter capacity branch lines will be able to enjoy the economies and convenience of the hopper car without the extremely costly alternative of upgrading the roadbed and rail on these lines. CP Rail has undertaken to use the 100 ton steel cars on their 220 thousand pound capacity lines but loaded only to weights equivalent to the 90 ton aluminum cars.

Utilization of Equipment

Utilization of rail equipment is measured by the number of ton miles performed by the piece of equipment in question in a specific time period. The greater the number of ton miles performed, the higher the utilization.

In grain service, because the equipment must be returned to primary elevators empty for reloading, utilization of equipment can be approximately measured by determining the time required for a car cycle. A car cycle consists of the loading of the car at the primary elevator, its movement to a port terminal where it is emptied, and its return to a primary elevator ready for loading grain. The time required to complete a car cycle can fluctuate considerably during a

year because of demand for the movement of grain from primary elevators, labor problems in one or more sectors of the grain industry, or railway operating problems. Actual average car cycle times for 1971 ranged from a low of 13 days to a high of 24 days in the Thunder Bay service, and from a low of 17 days to a high of 26 days in the Vancouver service.

Many factors affect the railways' ability to obtain maximum utilization from their equipment and many of these are beyond their control. For example, rail service is provided seven days per week, but loading takes place in the country only about five and one-half days and port terminals do not unload on Sunday. The vagaries of ocean shipping also tend to affect port terminal operations and the consequent congestion inhibits the unloading of railway cars and delays return of empties to the country for reloading. Labor interruptions in both handling and transportation segments of the industry and severe weather, particularly in the mountains, can create difficulties from time to time.

Because of the high capital cost of rail equipment, it is important that it be utilized to the greatest possible degree.

The Block Shipping System has improved car utilization considerably. Prior to its implementation, there was very little effective control over what was loaded into box cars in the country and hence appeared at the port terminals. What this meant to the railways was that grain, for which there was no demand at port terminals, sometimes remained stored in box cars for long periods of time.

A high level of car utilization can be achieved by:

1) Loading only the grades and kinds of grain required to meet current sales commitments;

2) The prompt unloading of these grains upon presentation at export terminals;

3) Minimizing short-term fluctuations in the weekly rail transportation workload levels.

The Commission asked the railway companies to examine the impact of network rationalization on routing, car cycles, motive power and car requirements.

In reporting on a joint examination, CP Rail, in their July 29th submission to the Commission, reported:

> "In conjunction with Canadian National, estimates were made regarding which of the retained lines would receive the grain from lines that are proposed for abandonment. The 1974 direct shipment carloads of grain was the traffic base for this analysis. The new traffic volume on each retained line was assumed to have the same destination pattern as the traffic on the retained lines had before rationalization. This analysis assumed that the lines recommended for deferred discontinuance were retained.
>
> "The operational characteristics of the traffic on the retained lines were simulated, based on the 1974 operational characteristics of the traffic (i.e. car mix, car days, car miles, train weights, etc.). This 1974 operating data base is the same data base submitted to the Snavely Commission."

The results of this analysis, based on the average car, before and after rationalization, are shown in the following table.

TABLE VI-3

Railway Equipment Utilization - Canadian National
Rationalization Proposals

Average per Carload	Before Rationalization	After Rationalization
Car Days	22.9	22.4
Car Miles Empty and Loaded	1,564.6	1,556.7
Diesel Unit Miles	50.6	50.2
Train Weight	5,022 tons	5,050 tons

The Canadian National estimated that, with the branch line abandonments they had recommended, their total equipment requirements would be reduced by 21 diesel locomotive units and 1,740 grain box cars.

Canadian National, in their final submission to the Commission at Saskatoon, stated the effect on Canadian National operating efficiency of their proposed abandonment schedule of 2,532 miles to be a reduction of 636,220 car days.

TABLE VI-4

Improvements in Operating Efficiency

	Canadian National Estimated Reduction				
	Track Miles	Train Miles	Diesel Unit Miles	Car Miles	Car Days
Abandonment					
- in 1977	2,030	329,666	730,234	17,968	340,543
- subsequent to 1977	502	279,202	642,305	15,270	295,677
TOTAL	2,532	608,868	1,372,539	33,238	636,220

Larger volumes of grain could be handled with current rail equipment if utilization of the equipment were increased. The breakdown of an average car cycle in 1973 showed the majority of time was spent in the yards loaded and empty, totalling close to 60 percent of the car cycle time. This then is the area of greatest potential improvement.

TABLE VI-5
Breakdown of an Average Car Cycle*
Canadian National Railways

Function	% of Time	Cars of 22.9 car cycle
Enroute empty	6.1	1.4
Enroute loaded	7.4	1.7
Unloading	13.5	3.1
Loading	13.5	3.1
Standing in yards-loaded 1)	25.0	5.7
Standing in yards-empty 1)	34.5	7.9
	100.0	22.9

* From a paper "Dimensions of the Car Supply Problem", John Gratwick, V.P. CNR, at the Symposium "Rail Car Utilization and Supply Problems and Possibilities", Vancouver, February 28, 1974.

1) Includes being classified and assembled into trains, moving within terminals and standing idle.

The railways predicted reduction in car cycle of one-half day through implementation of their recommendations would increase the volume of grain the present equipment could handle by about 14 million bushels per year.

TABLE VI-6

1974 Car Cyle

1974 Direct Grain Shipments*

	Car Loadings	Car Days	Tons	Car Cycle
CP	160,431	3,679,210	10,460,400	22.9
CN	166,104	3,775,531	9,603,900	22.7
	326,535	7,454,741	20,064,300	22.8

* Volume 1, Report of the Commission on the Costs of Transporting Grain by Rail.

As the following table illustrates, a reduction of 2.9 days in the car cycle time would permit the carriage of an additional 102 million bushels of grain. With a reduction of 7.9 days to a 15 day cycle, present equipment could carry a potential 1.1 billion bushels or a 52 percent greater volume than now carried.

TABLE VI-7

Projected Annual Volumes of Grain
With Reduced Car Cycles

	Annual Volumes			
Car Cycle	22.9	22.4	20.0	15.0
Millions of Tons	20.0	20.4	22.8	30.4
Millions of Bushels	735	749	837	1,117

Recommendations

To increase the level of efficiency in car utilization, the Commission recommends:

1) An interchange of grain traffic between rail carriers, at open interchange points in Western Canada, to use the shortest least cost route to destination. Similar to the Calgary/Edmonton interchange agreement;

2) An interchange of traffic between carriers to provide CP origin cars access to port terminals of Prince Rupert and Churchill, now served exclusively by Canadian National;

3) The Government car fleet become interchangeable between railways. That cars not be assigned exclusively to one railway;

4) Expansion of the grain co-ordinator function to inland yards in Winnipeg, Kamloops, Edmonton and Calgary to ensure the movement of the grain required;

5) Rail car unloading at terminal elevators must be on a seven day per week basis;

6) That the Department of Transport and the railways undertake an experiment to modify present box cars with roof hatches and end unload gates, for use on the lighter prairie branch lines;

7) Future orders of hopper cars must be co-ordinated with the needs of the Prairie Rail Authority taking into account the large proportion of light carrying capacity lines under the Authority's jurisdiction where 70 ton capacity hopper cars are preferable in replacing box cars.

Rail Car Allocation

The September 1975 study of car allocation procedures by J.F. Mants and recently suggested modifications to some of the original recommendations should correct many of the problems associated with car allocations.

The Commission understands that the recommendations have generally been accepted by the grain trade, and that they will be reviewed, and changed if necessary, after a suitable period of use.

The Mants report contained the nine following recommendations:

1) Documentation of Allocation Procedures

That a documentation of the system used in allocating shipping orders, and calculations in dealing with congestion be prepared and kept current.
That each grain company receive a monthly statement indicating licensed capacity, space, handlings for the period, cars shipped and twelve month handling percentage.

2) Study of Block System

That a technical committee be re-established to review the results of seven years operation of the block shipping system.

3) Refinement of the Block as the Basic Unit for Administration

That sub-blocks be established as the basic unit for car allocation, quota administration and congestion calculations, these sub-blocks to be based on train runs (railroad subdivisions).

4) Outstanding Shipping Orders

That steps be taken to keep the outstanding orders within a range not exceeding 500 to 600 cars under normal conditions.

5) Primary & Alternate Delivery Points

That producers elect only a primary delivery point but have the right to deliver to any delivery point in the Wheat Board area.

6) Terminating Quotas

That the use of terminating quotas continue and that a consistent policy of cancellation or termination of quotas be announced at the beginning of the crop year and applied and the use of open quotas be discontinued.

7) Modification of Grain Car Allocation Formula

This recommendation suggests that space in the primary elevator system be maintained at 35 percent of the licensed capacity. When a company has less than 35 percent space in a block or sub-block it will be considered congested. When all companies have 35 percent or more space, shipping orders will be allocated on the percentage of business done by each company the previous year. When the space of any company in a block or sub-block drops below 35 percent, shipping orders will be issued first for that company and the remaining orders will be allocated to companies on the percentage of business handled in the previous year. When all companies in a block are congested, orders will be allocated progressively until all companies space is as close as possible to 35 percent. Provision is made for new companies without any previous record to ship Wheat Board grain when called for and for shipping orders for non-board grains to meet sales contracts within the time constraints applying to all companies.

8) Leased or Owned Cars

That conditions be set out for use of leased or owned cars outside of the allocation formula.

9) Authority for Allocation of Cars

That the Canadian Wheat Board continue to administer the allocation of rail cars used in the movement of grain.

Dissatisfaction with car allocations was expressed at many local hearings. The Commission sensed that the procedures used in allocating cars were not generally understood. Currently the Canadian Wheat Board issues shipping orders on a block basis to the grain companies represented in that block. The grain companies then allocate the orders to their elevators in the block as they see fit. It then becomes the responsibility of the railway company to spot the cars at the elevators designated by the grain company. Many times the railways were blamed for failing to provide cars at primary elevators, when no shipping orders had been allocated to them by the grain companies. The railways admitted that while they were sometimes late in spotting cars at certain points they had never failed to move the quantities of grain requested.

The Commission recognizes that congestion at primary elevators can be serious for the producers affected. It is also of the opinion that no perfect system to relieve congestion is likely to evolve, that will be effective under all conditions. When Canada's export grain sales are buoyant and the various components in the transportation and grain handling systems are functioning properly elevator congestion is not a serious problem. Conversely, when markets shrink or kinds of grain and grades required by the market are not available, problems of congestion may become acute.

Some producers suggested that discrimination existed in car allocations between rail lines only capable of handling a standard box car and rail lines capable of handling a 90 ton or 100 ton covered hopper

car. Upon investigation the Commission determined that the Canadian Wheat Board does take the capacities of the different types of cars into their calculations to determine number of cars required to move the desired volume of grain. On a car for car basis over a short period of time, what may appear discriminatory will be adjusted by the provision of more box cars than hopper cars to move the same volume of grain.

Allegations were made at many local hearings that some delivery points were denied cars when other points in the same block were receiving cars, even when kinds and grades of grain were similar. The inference was that grain companies were using car allocations to force closure at some stations to hasten elevator rationalization.

The Commission recommends that a procedure be established by the Canadian Wheat Board to:

1) Upon receipt of a written request from ten or more permit book holders at a grain delivery point issue statements:

   a) showing the number of cars allocated to a particular grain company in that block or sub-block and the kinds and grades of grain ordered;

   b) the number of cars allocated by individual companies at that point and the kinds of grain and grades ordered;

   c) the number of cars allocated by individual companies to other stations in the block or sub-block showing the kinds of grain and grades ordered.

Railway Subsidies

The National Transportation Act of 1967 established the terms of reference for the regulation of the transportation industry in Canada and, in particular, defined and provided the mechanism to implement a National Transportation Policy.

The Act declared that:

> "... an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada."

Furthermore, it provided that:

> "(d) each mode of transport as far as practical, should receive compensation for the resources, facilities and services that it is required to provide as an imposed public duty; and"

The objectives and principles enunciated in the National Transportation Act were carried into the Railway Act.

In the early 1960's, the railways had applied for a number of branch line abandonments, leading to concern in many quarters over the type of system which would be left after such piece-meal abandonments.

With the intention of passing legislation providing a more comprehensive and reasonable basis for branch line abandonments, the Government requested the railways to place a moratorium on branch line abandonments in the Prairie Provinces.

The railways agreed, and from 1963 to the passage of the Act in 1967, only four cases were dealt with.

About the time of the passage of the National Transportation Act, the Federal Government passed an Order-in-Council which prohibited the railways from applying for abandonment of all lines in Western Canada, except for 1,839 miles. In July 1973, at the Western Economic Opportunities Conference, in Calgary, it was announced that abandonment of these lines was also prohibited and the entire system frozen until January 1, 1975.

The National Transportation Act created both the Canadian Transport Commission and its Railway Transport Committee. The areas of responsibility of that Committee include the abandonment and discontinuance applications, subsidies, traffic and freight rate matters, railway construction, operations and safety.

The Act provides for the subsidization of an uneconomic line which is ordered by the Committee, or by Order-in-Council under Section 258(1), to be continued in operation. Following the Western Economic Opportunities Conference, all lines were protected. The railways were prevented from applying for abandonment. Section 258(1) of the Railway Act came into operation and the railways were then enabled to obtain subsidies for uneconomic lines without applying for abandonment.

For 1975, subsidies were claimed on 12,225 miles of line, which represents approximately 63 percent of the total prairie network. The history of subsidy applications is given in Table VI-8.

TABLE VI-8

Claimed Losses on Prairie Branch Lines
By CP Rail, C.N.R. and N.A.R.
Under Sections 256 & 258 of the Railway Act
And Payments To December 31, 1976 - Years 1967 - 1975

	CP RAIL		CNR	
	Claimed Losses	Payments To Date	Claimed Losses	Payments To Date
1967				
1968				
1969				
1970	18,124,646	13,279,685		
1971	21,656,090	15,892,947	22,189,325	15,706,014
1972	19,876,298	16,076,935	33,049,709	20,530,312
1973	24,089,952	16,916,980	39,039,141	27,076,039
1974	34,665,591	29,298,187	68,719,409	44,441,012
1975	48,467,219	33,859,182	67,100,828	46,372,418
1967-75	$ 166,879,790	$ 125,323,916	$ 225,098,412	$ 154,125,795

	NAR		TOTAL	
	Claimed Losses	Payments To Date	Claimed Losses	Payments To Date
1967	2,164,666	---	2,164,666	
1968	2,569,102	903,551	2,569,102	903,551
1969	3,065,247	897,114	3,065,247	897,114
1970	3,001,265	1,173,833	21,125,911	14,453,518
1971	2,986,891	1,120,191	46,832,306	32,719,928
1972	3,213,241	1,162,681	56,139,248	37,769,928
1973	3,452,334	1,552,828	66,581,427	45,545,847
1974	5,287,417	1,782,196	103,672,417	75,521,395
1975	5,372,830	2,269,604	120,940,877	82,501,204
1967-75	$ 31,112,993	$ 10,861,998	$ 423,091,201	$ 290,311,709

Until December 31, 1976 the three railway companies had filed claims of $423 million since the beginning of the branch line subsidy program. Subsidy payments to December 31, 1976 totalled $290.3 million or 68 percent of the amount claimed. CP Rail, in this period, have received 75 percent of their claims, Canadian National 68 percent and, in the case of, Northern Alberta Railways 35 percent of their claims had been processed and paid.

The differences that exist between the claimed loss by the railways and the actual payments, are due to a number of unresolved issues between the railway companies and the Canadian Transport Commission. Over a period of years these differences have increased to a point, at the time of writing, of being $132.8 million. The Commission asked the railway companies and the Canadian Transport Commission to identify these differences, and the magnitude of each. While identifying some of the issues, the railways found it difficult to respond to this Commission's inquiry as, they contend, they have not been advised by the Canadian Transport Commission in detail, of the reasons for differences on all lines, or the amounts disallowed.

The Canadian Transport Commission advised this Commission that these disallowances pertain generally to outstanding legal and costing issues for which amounts can be readily identified, and which will be resolved by the Railway Committee Staff. None of these issues, dating back to 1967, the beginning of the program have been resolved, nor have claims been reduced by a disallowance.

The Canadian Transport Commission refused this Commission's request for a breakdown of these major disallowance and holdback items. Despite the fact that the Canadian Transport Commission had earlier agreed to supply such a breakdown, this Inquiry Commission received the following communication on March 14, 1977.

> "Your request for a breakdown of the amounts disallowed and heldback with respect to branch line subsidy claims has been carefully reviewed. Whereas you were previously provided with a list of the major disallowance and holdback items, it has been decided that no breakdown of the amount outstanding will be provided. As you are aware, the amounts currently outstanding reflect an interim position pending the resolution of numerous costing and legal problems. Until such issues are finalized and subsidy payments adjusted accordingly, it is considered that release of interim figures would serve no useful purpose and could in fact cause considerable misunderstanding.
>
> "Furthermore, the relevance of this data to the examination of individual branch lines for purposes of determining the feasibility of abandonment is not clearly understood."

The Commission recommends:

> The Canadian Transport Commission, in a report to the Minister of Transport, on or before July 31, 1977, should identify the legal and costing issues and the amounts owing for each branch line, also advising the railways which items are disallowed, and the reasons therefore; a listing of those items which are holdbacks, the amounts and reasons, and establish a timetable for resolution of unresolved claims.

Unit Trains

The Commission heard a lot of talk which suggested that unit trains would bring about the millenium in the transport of grain to export positions. The unit train concept has been eminently successful in the transportation of coal, potash and other bulk commodities, but that does not mean that it can be applied holus-bolus to grain.

Coal, potash, sulphur and such commodities are generally of one quality from the same mine or source. It is practical, in their case, to load a train of cars in one operation, and to unload those cars as a continuous operation into the hold of a ship.

Grain is different. There are many types of grains and grades of grain and grains of different qualities. It is seldom, if ever, possible to find an inland elevator with sufficient grain of one grade and quality to load 125 or more hopper cars as one operation. This requires 375 thousand bushels which is seldom available at one location, or from one source, with a loading track capable of holding 125 or more cars. There are no conventional port terminals equipped to accommodate unit trains in storage or direct to vessels.

An experimental unit train might be made up and loaded from one of the Government elevators, or one of the other similar facilities, but that would require the intervention of the Canadian Wheat Board in allocating grain, of the grade and quality to that facility so that the required 375 thousand bushels would be available for immediate loading at the precise time the 125 hopper cars were on the loading track.

No such loading tracks, or facilities, are available in the prairie region, nor was the Commission told that any were contemplated. The loading tracks at Weyburn, Elm Creek or Rosetown are not so capable. A continuous loading operation is not accordingly possible.

There exists much confusion between what is being called a unit train and what is known in railway terms as a solid grain train.

Grain to Vancouver, Thunder Bay, Churchill and Prince Rupert is now moved in solid grain trains. These trains carry all grain but not necessarily grain all of the same grade and quality, nor even the same kind of grain. The solid train may carry wheat, oats and barley, or all wheat or oats or barley.

The solid train is made up at designated marshalling yards, such as Winnipeg, Moose Jaw, Calgary, Edmonton and others from cars of grain brought to these points from the main and branch lines feeding into them.

Having arrived at Thunder Bay or Vancouver, these solid trains are broken up and the cars distributed to the terminals there in accordance with the directions of the Controller. It is his function to spread the incoming grain cars as equitably as possible among the several terminal elevator companies located in the port. In single terminal ports, such as Churchill and Prince Rupert, the grain, such as it may be, as called for by the Canadian Wheat Board, is unloaded into the terminal into the several bins available to receive differing grades, etc.

The unit train concept would not be of much economic value to producers unless a new and marked departure in the freight rate structure for the carriage of grain was adopted by Parliament in which the mileage related statutory rate principle is discarded.

The Commission is firmly of the view that variable tariffs which would give plants, capable of loading unit trains now or in the future any preferential rate treatment, must not be introduced.

The Commission deals with statutory rates and their implications in Chapter XIII.

The Producer Car

The right of producers to load their own rail cars is embodied in the Canada Grain Act 1970 Sec. 71 (1).

> "A producer of grain who has grain in sufficient quantity to fill a rail car, that he may lawfully deliver to a railway company for carriage to a terminal elevator, or to a consignee at a destination other than an elevator may apply in writing to the Commission, in prescribed form, for a railway car to receive and carry the grain to the elevator or other consignee."

The right of producers to order and load their own car had its origin in a controversy between the railways and the owners of flat warehouses. The warehouse was the original facility to accumulate grain for loading to rail cars in Western Canada. As country elevators began to make their appearance in Western Canada these warehouses became technically obsolete. The railway companies favouring the new elevator facility undertook to provide lease sites free to companies willing to build elevators. The railways agreed to supply rail cars only to the

elevators at stations where there were both elevators and flat warehouses. The Federal Government appointed a Royal Commission in 1899 to inquire into producers complaints, among them the refusal of the railways to provide service to flat warehouses. Recommendations of that Commission led to the passage of the Manitoba Grain Act in 1900, which prohibited the railways from refusing to service flat warehouses. Amendments to the Act in 1902, introduced the car order book. Persons wishing to obtain railway cars for the shipment of grain were required to place an application on the car order book, maintained by the railway agent. Cars had to be distributed in order of application.

In the well known Sintaluta case, the Supreme Court of Canada upheld the producers right to obtain and ship railway cars, a right which had been denied by the Canadian Pacific Railway, in this case in 1902.

Current Regulations

Current regulations respecting the application for producer cars were approved by Order-in-Council PC 1976-2072, of August 19, 1976.

In filing an application with the Canadian Grain Commission, a producer nominates a grain company to handle loading documents. The grain company is permitted, under the Primary Elevator Tariff, to charge the producer a maximum of $100.00 for "administration for producer railway car". The grain company manager, at the specified delivery point, is advised of the approval, and he in turn is responsible for notifying the producer of the date and time of placement of the car in which to complete loading. It is the producer responsibility to:

(a) make arrangements for the preparation of the customary documents accompanying the shipment, and (b) make arrangements with respect to the unloading of the car at the destination point specified in the application.

The provision of the Income Tax Act regarding deferred payment is being construed as only applying to deliveries to primary elevators.

The Commission found throughout its hearings that producers generally found the procedure for ordering producer cars complex, it involved the Canadian Grain Commission, The Canadian Wheat Board, a grain company and the railway. In most cases, a lack of awareness by producers of the mechanics or the procedures involved was evident. Some producers felt that regulations, such as the eight hour loading limitations, not applied to the primary elevator, and the income tax provisions for deferred payment, discriminate against producer cars.

Loadings of grain by producers have not been significant in terms of total marketings in Western Canada. In the five year period, 1971-72 to 1975-76, platform loadings averaged 209 cars per year, or approximately 420 thousand bushels, equal to less than 1/10 of one percent of total producer marketings.

Crop Year	Producer Cars
1971-72	183
1972-73	193
1973-74	181
1974-75	96
1975-76	394

This is a right which the early producers fought to retain. While it is still embodied in statute, producers are frustrated by its application. It should not be allowed to die. The Commission believes that

the system can, without adversely affecting the movement of grain through normal channels, easily handle up to five percent of producer marketings. This would mean approximately 40 million bushels, or 20 thousand cars annually, being loaded directly by producers, resulting in savings, to those producers, of approximately $4.8 million yearly in elevator handling charges.

The Commission recommends that:

1) The Canadian Wheat Board assume total responsibility for a producer car program. Producers would apply to the Canadian Wheat Board for cars, the Board would undertake to have the railway company spot cars, notify the producer, and provide the producer with "for orders" bills of lading. Upon arrival at the Lakehead or West Coast the Board would allocate cars to indivdual terminals for handling. The Canadian Wheat Board would provide total co-ordination of the program for the producer. The grain companies at the primary delivery point would not enter into the transaction.

2) The Canadian Wheat Board should undertake a program to increase the producer's awareness of this program, the availability of producer cars, the procedure for ordering, loading and billing cars, and the producers responsibilities in loading and shipping.

3) That changes be made in regulations so that producers have the same amount of "free time" to load cars as do primary elevators.

4) That changes be made in the Income Tax Act regulations to allow producers shipping producer cars, the same priveleges in respect of income deferment as producers who deliver direct to primary elevators.

5) Where a primary elevator at a single elevator point is closed, the siding should remain in place for the spotting of producer cars. The Railway should only be given permission to remove that siding if no producer cars are loaded in the 12 month period following closure of the elevator, or if adequate alternate spotting arrangements are available.

Clinton Ashcroft Link

The Clinton Ashcroft Link between the Canadian National and/or the CP Rail near Ashcroft, and the British Columbia Railway at Clinton, has been a matter of debate for many years. A survey of one proposed route was completed as long ago as February 14th, 1918.

A tentative agreement to construct this link on an equally shared basis, between the Government of Canada and the Government of British Columbia, was reached in July 1973 at the Western Economic Opportunities Conference in Calgary, where it was said by the Minister of Transport:

> "We are in full agreement with the Western position regarding the enlargement of port facilities and improving access to those ports, particularly to the Lower Mainland of British Columbia. This will bring enormous benefits for the movement of mineral concentrates, coal, forest products, increased quantities of Prairie Grains, oilseeds and oilseed products.
>
> "The production areas of the West require continuous unhindered access to our international gateways. In recognition of this need for comprehensive improvement to the trunk rail connections, part of the agreement which the Governments of Canada and British Columbia concluded yesterday will ensure the construction of the Ashcroft-Clinton rail link. This will produce benefits for Prairie grain shippers as well as British Columbia resource industries. It will protect the system from the blockages that occur from time to time on CN and CP's canyon routes and it will also provide a further assurance that as traffic grows it will not have to be diverted through the United States."

Since then the present Government of British Columbia has reconsidered the matter, and stated at the Commission hearings in Vancouver, that they would rather spend the funds on higher priority

projects. One of their reasons was that the amount of traffic generated in the British Columbia interior and destined to points in Canada, and the United States, which could utilize this link is not sufficient to warrant its construction at this time. Both Canadian National and CP Rail were opposed to construction of this link.

Some of the reasons put forward to the Commission for the construction of the link were as follows:

1. The undependability of the Fraser Canyon route. The lines through the canyon have been blocked on numerous occasions due to rock, mud and snow slides. The possibility of the canyon becoming blocked due to the mountain sliding into the Fraser Canyon is very real. In the area between Hells Gate and Hope cracks are developing in the mountain, considerable scaling, cementing and bolting has been done to try to stabilize the mountain.
2. War or other National Emergency: In the event of war or sabotage the entire Fraser Valley could be easily blocked with explosives. This could close the Canadian National, CP Rail and the Trans-Canada Highway and effectively cut East-West transportation for months.

3. Earth tremors of varying degrees of severity are a possibility.

4. Squamish Terminal:

Grain utilization of the link and the British Columbia Railway could make Squamish a viable terminal port. Interest has been shown in building a terminal at Squamish. This also would relieve some of the traffic through Vancouver.

5. In the event of a serious blockage in the Fraser Canyon the only present Canadian rail route to Vancouver would be via Edmonton, Jasper, and the British Columbia Railway. This route is not physically capable of carrying the extra traffic for a prolonged period of time. As one of the time constraints in building a rail line is the acquisition of a right-of-way, the Commission recommends that this be done immediately, and that the engineering for construction of this link be completed.

In view of the fact that despite what was agreed to at the Western Economic Opportunities Conference, no immediate plans are being formulated to carry out that agreement.

The Commission recommends that;

1. The right-of-way required for the Clinton Ashcroft Link be acquired immediately by the Government of Canada and

the British Columbia Government, as agreed at the Western Economic Opportunities Conference.

2. That the engineering and plans be completed for construction of the linkage so that it could be built quickly in an emergency situation.

The next generation may revert to the wisdom displayed at the Western Economic Opportunities Conference.

The Parallel Rail Lines

Specific instances of rail lines existing relatively close and parallel to one another were frequently mentioned. The more prominent of these were: The Canadian National and CP Rail lines between Saskatoon and Unity; the Canadian National and CP Rail lines from Regina to Moose Jaw; the CP Rail Alberta Central and Canadian National Brazeau Subdivisions; the Northern Alberta Railways Waterway Subdivision and Canadian National Coronado Subdivision from Redwater to Edmonton; as well as the several lines north and west of Brandon and in the Interlake Region in Manitoba.

The Commission was able to rationalize those parallel lines in Category "B", but those in the Basic Network were outside of this Commission's jurisdiction. Nevertheless, the Commission recognizes the merit of the submissions that argued that these are duplications. The railways should study the economics of joint track usage in the Saskatoon to Unity and Moose Jaw to Regina cases.

Electrification

Throughout the hearings there were suggestions that railways should be electrified. The Province of Manitoba, in particular, stressed that electrification be closely studied. It is the province that is in the best position to electrify its transportation lines.

Electrification is widespread in Europe, with 100 percent of the system in Switzerland operated on electricity; 62 percent in Sweden, 60 percent in France and 38 percent in West Germany. Studies carried out in Canada, and the United States, indicate that due to high capital costs electrification becomes an interesting possibility only when traffic densities of over 15 million tons per mile of track per year are attained. If 15 million tons per mile is the threshold for electrification then 20 percent of Canada's rail system carrying 70 percent of all rail traffic would qualify for electrification. The only detailed study on the rail electrification was carried out in 1971-72 by CP Rail. Traffic densities of 30 million gross tons per mile of track per year between Calgary and Vancouver make this a prime candidate for further immediate consideration.*

As well as the savings in fossil energy, electrification has other technical attributes relating to haulage efficiencies.

Canada has concentrated her transportation research in other areas and the slow application of modern technology to the railway

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* The Railway Game, by J. Lukasiewicz

mode is evidence that this policy cannot continue if Canada is to meet its transport requirements. Research into the application of electrification of Canadian railways should be undertaken by Transport Canada.

Public Ownership of Railway Roadbeds

Public ownership of the railway roadbed has in the past been put forward as the simplest if not the only way to achieve genuine railway rationalization in Canada. This subject has been debated for many years in Western Canada by various organizations and the provincial governments.

Following the Western Economic Opportunities Conference in Calgary in 1973 a further cost study of this proposal was undertaken, "Roadbed Costs and Cost Relief Options For Canada's Contiguous Railways".*

The benefits and burdens of this concept have not been dealt with by this Commission and would involve an extensive evaluation before any recommendation could be made. The Commission is of the view that nationalization of railway roadbed must involve consideration on a national scale. Canada's railways serve all provinces and to some degree the territories. Any consideration of nationalization must be made at the national level.

As is recommended elsewhere in this report, ownership in the roadbed, following abandonment is to vest in provincial crown.

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* P.S. Ross & Partners, MPS Associates Ltd., R.L. Banks & Associates Inc., The M.W. Menzies Group Limited, George H. Borts, (Brown University) and George W. Wilson (Indiana University) March, 1975.