

On export grain shipments, the report noted that the company had hauled 169 million bushels since the start of the crop year in August, and said that it had met the requirements of the Canadian Wheat Board "efficiently and expeditiously" in the national interest.

Revenues from passenger services continued the trend of 1962, when a prolonged decline in revenues was halted. Passenger-services revenues in 1963 totalled \$44.4 million, an increase of \$400,000 over those of the previous year. The improvement was achieved despite a 6 percent reduction in passenger-train miles operated.

Net income from CN telecommunications services was \$5.4 million, with higher revenues recorded in telex, telephone and leased wire services.

The report also noted a net operating profit of \$1.3 million for the system's eight separately-operated trucking companies and two associated terminal companies. Net income from hotels was \$1.4 million.

FREIGHT AND PASSENGER SERVICES

The high volume of freight business during the year represented "concrete rewards from long-range sales-development programmes that have been implemented", the report said. One of these was the Customer Research Service, which makes the various technical and research groups of the railway available to customers for the solution of transportation problems.

For the third consecutive year, a new fast freight train had been put into service to improve schedules between the Eastern and Western provinces. Revenues of "piggyback" services went up by 6.3 per cent; among the new items of freight equipment ordered were 55 tri-level automobile transporters, 100 covered aluminum hopper cars and 100 additional 70-ton flat-cars.

In passenger service, the economical Red, White and Blue fare plan was extended to most parts of Canada after a one-year trial between points in Quebec and the Maritime Provinces had indicated that business could be substantially increased through this form of pricing. The report said travel features introduced during 1963 had included charter coaches and sleepers for groups and "Car-go-Rail" service that enabled passengers' automobiles to be transported in conjunction with their rail trips.

Construction moved ahead on the Great Slave Lake Railway, which will extend 377 miles from Roma, Alberta, to Hay River in the Northwest Territories, with an additional 53-mile branch line to Pine Point Mines. By the year's end, 226 miles of track had been completed. Three other branch lines were completed in 1963 to serve the mining industry in isolated areas of northern Quebec and Manitoba, and in New Brunswick.

TELECOMMUNICATION SERVICES

The new microwave systems were completed in 1963. The larger was the Montreal-Vancouver link, built jointly with the Canadian Pacific Railway. With the existing facilities east of Montreal, the new system forms a transcontinental trunk route

serving major centres across Canada. The second microwave facility, a tropospheric scatterwave radio system, reaches from Hay River, to Lady Franklin Point on Victoria Island in the Arctic, a distance of 554 miles.

EXPERIMENTAL SAWMILL

Mr. Maurice Sauvé, the federal Minister of Forestry, recently announced that tenders were being called for the construction of a research sawmill at his Department's Petawawa Forest Experiment Station, Chalk River, Ontario. This establishment will facilitate production studies under controlled operating conditions, substantially furthering the sawmill-research programme of the Department's forest-products research branch. Such production studies are not practical in commercial sawmills because of variables in operating conditions. The development of improved sawmilling methods is an important and continuing phase of forest-products research.

ADDED BENEFITS

The Petawawa mill will enable the Department to further its research on lumber seasoning. It will also be a great asset to the silviculture and woods-management researchers at the Petawawa Forest Experiment Station, where intensive forest research has been in progress for the past 45 years. The mill will help these experts assess the effects of pruning, stand density, soil conditions and other factors on lumber quality and yield.

The new sawmill, designed by property-management officials of the Forestry Department in co-operation with the research personnel concerned, will be situated on the shore of Thomas Lake, one mile from the Experiment Station's headquarters. Measuring 60' x 136', it will be of frame construction on a reinforced-concrete foundation, with a 60-foot-span, glued-laminated superstructure. The exterior facing will be of plywood, with interior walls finished in plywood and chipboard panelling.

NATO SCIENCE AWARDS

The National Research Council of Canada has awarded 26 NATO science scholarships and fellowships for 1964-65, with a total value of \$108,000. These awards, for study abroad in various fields of pure and applied science, are designed to stimulate the exchange of postgraduate students among member countries of NATO. They represent Canada's part in NATO's Science Fellowship Programme.

During the coming year, 11 NATO postgraduate scholarships valued at \$3,000 each will be held, six in Britain and five in the United States.

Fifteen NATO postdoctorate fellowships, valued at \$4,000 for single and \$5,000 for married fellows, will be held as follows: three each in Britain, France, and the United States; two each in Denmark and Germany; and one each in the Netherlands and Norway.