

64th
GREAT NORTHERN
RAILWAY COMPANY
Annual Report
1952



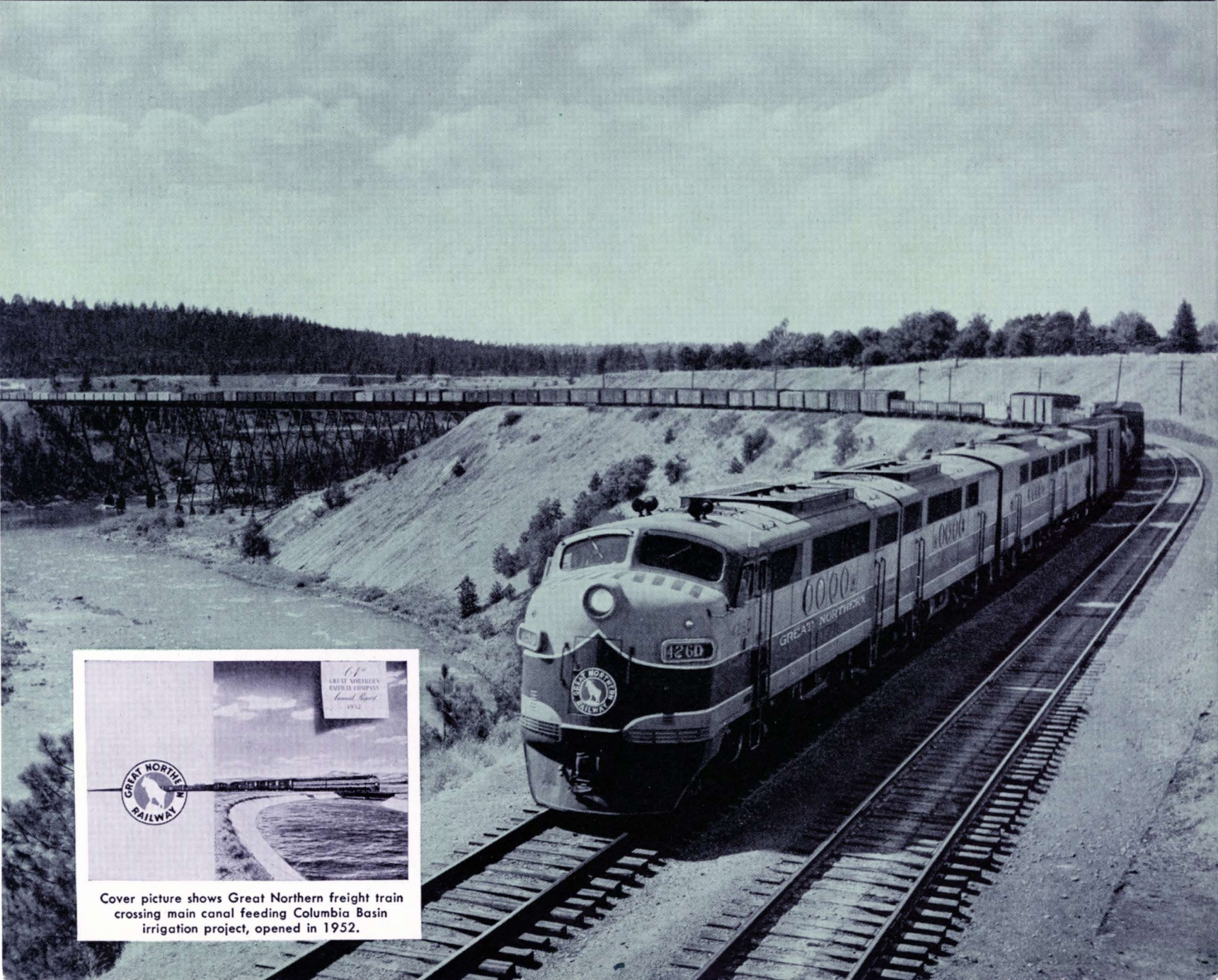
GREAT NORTHERN RAILWAY HIGHLIGHTS OF 1952

ITEM	1952	1951	1950	1949	1948
Financial Data in Millions of Dollars:					
Net Income	\$ 27.7	\$ 23.9	\$ 28.2	\$ 18.7	\$ 27.6
Dividends Paid	12.2	12.4	10.8	12.4	10.8
Operating Revenues	260.2	248.0	227.5	212.3	216.3
Taxes	38.1	36.9	34.5	26.0	24.0
Fixed Charges	8.0	8.2	7.9	7.7	7.5
Rate of Return on Property Investment	3.9%	3.6%	4.3%	3.4%	4.6%

Averages:

Per Share (3,044,432 shares, Dec. 31, 1952):

Net Income	\$ 9.10	\$ 7.83	\$ 9.11	\$ 6.05	\$ 8.91
Dividends Paid	4.00	4.00	3.50	4.00	3.50
Taxes	12.50	12.04	11.14	8.40	7.77
Fixed Charges	2.62	2.68	2.57	2.49	2.43
Percent Transportation Expenses to Revenues	33.4%	35.2%	33.5%	35.4%	36.9%
Percent Total Operating Expenses to Revenues	73.6%	74.3%	71.3%	76.3%	75.0%
Times Fixed Charges Earned	4.5	3.9	4.6	3.4	4.7



Cover picture shows Great Northern freight train crossing main canal feeding Columbia Basin irrigation project, opened in 1952.

GREAT NORTHERN RAILWAY COMPANY

EXECUTIVE DEPARTMENT

J. M. BUDD
PRESIDENT

ST. PAUL 1, MINNESOTA

March 31, 1953

To Great Northern Shareholders:

For 1952 your railroad collected over \$260 million in operating revenues, a new high for the third successive year. Net income of \$27.7 million, or \$9.10 per share of stock, was \$3.8 million above the net income for 1951. The improvement was largely due to a 7.7% increase in freight rates. The increase became effective May 2, 1952 and was granted by the Interstate Commerce Commission in belated recognition of the need for relief originally requested over thirteen months previously. The rate of return on the property investment was 3.9%. The 1951 dividend rate of \$4 per share was continued in 1952.

Cash expenditures for capital purposes totaling \$35.7 million included \$25.4 million for new diesel locomotives and other equipment. These expenditures were met in part by money from equipment trust certificates issued in 1951 and in part by using current funds. In December, 1952 \$8.5 million of equipment trust certificates were sold on favorable terms (a 2.91% cost) to provide funds for new equipment costing \$10.7 million programmed for delivery in 1953.

The volume of freight traffic handled in 1952 was 3% less than for 1951. Improved passenger services continue to attract favorable attention. System passenger revenues of \$14.1 million for 1952 were nearly 5% above those of 1951. This compares with a national increase of less than 1%.

Labor relations were more harmonious during 1952 than for several years. Agreement was reached in a nation-wide controversy with three operating unions that had continued since 1950. As a consequence the President of the United States instructed the Army to relinquish control of the railroads and this was accomplished on May 23. Quarterly cost of living increases in wages of employees during 1952 amounted to 7 cents per hour. The total increase for the year was approximately \$3.3 million.

The increased use of diesel locomotives and a lower fuel oil price caused a reduction in locomotive fuel cost during 1952 of \$2.3 million when compared with 1951. The percentage of revenues consumed by transportation expenses was 33.4%, the lowest in the past 7 years. All operating expenses took 73.6% of operating revenues, below similar figures for any year since 1944 with one exception.

Exploration and drilling in the Williston Basin oil field were actively expanded during 1952 and are continuing in 1953. At the end of the year 108 wells were in production in Great Northern territory, with shipments being made from Tioga and Watford City, N. D., and Sprole and Poplar, Mont.

This report features the State of Washington where the Columbia Basin irrigation project in central Washington received the first water in 1952. This story is developed fully later in the report.

Industrial growth and power plant development continued throughout the entire area. A total of 270 new industries were located along the line of your railroad, including lumber mills; grocery, hardware and other warehouses; grain elevators; oil loading racks, etc.

The physical condition of the railroad is good and it has been well maintained. The Directors and management are deeply appreciative of the loyalty of the officers and employees and the skill and energy with which the entire organization worked during 1952.

Traffic continues at a high volume. There is every prospect that the iron ore movement of 1953 will be a record-breaker. The fruit movement will exceed that of 1952. Over 50 million bushels of grain were in country elevators waiting movement on January 1, 1953, 6 million bushels more than on the same date in 1952. Moisture conditions are not too favorable at the present time, although the spring wheat crop has not yet been planted. Good spring rains can improve conditions materially.

The 64th Annual Report of Great Northern Railway Company for 1952 is herewith presented on behalf of the Board of Directors.


President

GREAT NORTHERN RAILWAY COMPANY

STOCKHOLDERS

32,612 Stockholders, November 20, 1952.

BOARD OF DIRECTORS

Term Expires May 14, 1953.

F. PEAVEY HEFFELFINGER . . . Minneapolis Executive Vice President, F. H. Peavey & Co.	RICHARD C. LILLY St. Paul Chairman of the Board, First National Bank of St. Paul
GRANT KEEHN New York Executive Vice President, The First National Bank of the City of New York	WALTER G. SEEGER St. Paul Chairman of the Board Seeger Refrigerator Co.

Term Expires May 13, 1954

J. STEWART BAKER New York Chairman, Bank of the Manhattan Co.
FRANK J. GAVIN St. Paul Chairman of the Board Great Northern Ry. Co.
JAMES F. OATES, JR. Chicago Chairman, The Peoples Gas Light and Coke Co.
FREDERICK K. WEYERHAEUSER . . St. Paul President, Weyerhaeuser Sales Co.

Term Expires May 12, 1955

JOHN M. BUDD St. Paul President, Great Northern Ry. Co.
THOMAS L. DANIELS Minneapolis President, Archer-Daniels-Midland Co.
WILLIAM L. McKNIGHT St. Paul Chairman of the Board, Minnesota Mining & Mfg. Co.
ARCHIBALD W. WITHERSPOON . . Spokane Chairman of the Board, Old National Bank of Spokane

EXECUTIVE COMMITTEE

JOHN M. BUDD	FRANK J. GAVIN	F. PEAVEY HEFFELFINGER
RICHARD C. LILLY	WILLIAM L. McKNIGHT	WALTER G. SEEGER

OFFICERS

F. J. GAVIN, Chairman of the Board	St. Paul
J. M. BUDD, President	St. Paul
V. P. TURNBURKE, Vice President, Executive Department	St. Paul
T. BALMER, Vice President	Seattle
I. G. POOL, Vice President, Operating Department	St. Paul
E. C. MATTHIAS, Vice President and General Counsel	St. Paul
C. E. FINLEY, Vice President, Traffic Department	St. Paul
F. L. PAETZOLD, Secretary and Treasurer	St. Paul
J. A. TAUER, Comptroller	St. Paul
C. W. MOORE, Executive Assistant	St. Paul
W. N. NORRIS, General Auditor	St. Paul
C. O. HOOKER, General Manager, Lines East of Williston	Duluth
T. A. JERROW, General Manager, Lines West of Williston	Seattle
A. W. CAMPBELL, General Superintendent Transportation	St. Paul
J. L. ROBSON, General Superintendent Motive Power	St. Paul
H. J. SEYTON, Chief Engineer	St. Paul
A. N. CRENSHAW, Purchasing Agent	St. Paul
J. C. KENADY, Right of Way, Land and Tax Commissioner	St. Paul
N. STOCKHAMMER, Assistant Secretary and Assistant Treasurer	New York
R. M. O'KELLY, Assistant Secretary and Assistant Treasurer	New York
C. F. ZIEGAHN, Assistant Secretary	St. Paul

EMPLOYES

29,157 Average Number for 1952

Principal Office: Great Northern Building, St. Paul (1), Minn.

Financial and Transfer Office: 2 Wall Street, New York (5), N. Y.

Annual Meeting of Stockholders, St. Paul, Minnesota, May 14, 1953

NET INCOME

Your Company's net income for 1952 was \$27.7 million or \$9.10 per share. This compares with \$7.83 per share for 1951. Interest on debt and other fixed charges were covered 4.5 times.

The improved net income was due largely to three factors:

1. Higher freight rates effective in May, 1952.

2. Increased operating efficiency flowing from better supervision and improved fixed property and equipment.

3. Income tax reduction from increased amortization charges, although this was offset somewhat by the higher tax rate—52% in 1952 and 50.75% in 1951. This is more fully explained under "Amortization of emergency facilities," page 10 of this report.

Four quarterly \$1 dividends were paid shareholders in 1952, the same as for 1951. In 1950 the total dividends paid amounted to \$3.50 per share.

The rate of return earned on the depreciated value of the property used for transportation purposes in 1952 was 3.9%. In 1951 it was 3.6%.

Income from sources other than railroad operations of \$10.1 million for 1952 was the highest in over 20 years. The principal items in this account are dividends on Chicago,

Burlington & Quincy R. R. Co. stock of \$6.2 million (\$5.8 million in 1951) and interest received from Spokane, Portland and Seattle Ry. Co. of \$2.0 million in both 1951 and 1952.

Interest on funded debt and other fixed charges of \$8.0 million for 1952 were \$229 thousand less than for 1951.

OPERATING REVENUES

In 1952, for the third successive year, Railway operating revenues established a new high at \$260.2 million, \$12.2 million or 5% above the \$248.0 million of revenues in 1951.

For the first quarter of the year revenues exceeded those of 1951 by over 10%, due largely to an earlier movement of grain and an increase in lumber shipments. From April to July a substantial decrease in revenues was encountered with grain and lumber loading at a lesser rate than in 1951. There was practically no movement of iron ore from June 2 to July 28 when the iron ore miners were on strike. The movement of other commodities was curtailed by the steel strike. Beginning with August, revenues increased again, and the total for the last five months of 1952 exceeded those for 1951 by over 14%.

1. FREIGHT SERVICE

Freight revenue in 1952 made a new high of \$226.3 million, an increase of \$10.7 million — 5% over 1951. The volume of traffic was off from 18.0 billion revenue net ton miles in 1951 to 17.5 billion in 1952, but increases in freight rates brought the average revenue per net ton mile for 1952 to 1.29 cents compared with 1.19 cents for the previous year.



WESTERN STAR IN THE ROCKIES

An increase of 7.7% was authorized by the Interstate Commerce Commission, effective May 2 and May 17, 1952, and amounted to approximately \$11.8 million for 1952 and \$16.4 million for a full year. The increase is in the form of a surcharge which expires on February 28, 1954, unless sooner changed by the Commission.

The chart below shows the effect of the delay by the Interstate Commerce Commission in deciding applications for increased freight rates in 1951 and 1952. While the presently existing rate level more nearly approaches the request of the railroads than has been the case for some time (about 1% under), the series of delays encountered, particularly the 13-month time lapse between March 28, 1951, and May 2, 1952, meant a loss in revenue to Great Northern of \$26.5 million for 1951 and 1952. Bills presented to Congress will, if passed, tend to reduce this lag in rate decisions.

Freight revenues by commodity groups for the past 5 years have been:

Commodity Group	Freight Revenues in Millions				
	1952	1951	1950	1949	1948
Manufactures and					
Miscellaneous.....	\$ 73.6	\$ 69.6	\$ 69.9	\$ 56.6	\$ 54.0
Products of Agriculture	63.9	62.7	51.7	58.4	54.8
Products of Mines.....	44.6	42.6	35.9	33.7	39.4
Products of Forests....	32.5	29.6	27.5	24.3	25.8
All other.....	11.7	11.1	10.6	11.1	12.9
Total.....	\$226.3	\$215.6	\$195.6	\$184.1	\$186.9

In 1952 lumber loadings totaled nearly 88,000 cars compared with 86,993 cars in 1951. Log loadings also increased some 4%.

Grain traffic amounted to 240.0 million bushels, or 5.3 million bushels less than the 245.3 million bushels handled in 1951, but revenue from grain was approximately the same in both years. Grain in storage in country elevators on line at the end of 1952 is estimated at 50.1 million bushels or 6.2 million bushels more than the grain stored at the end of 1951.

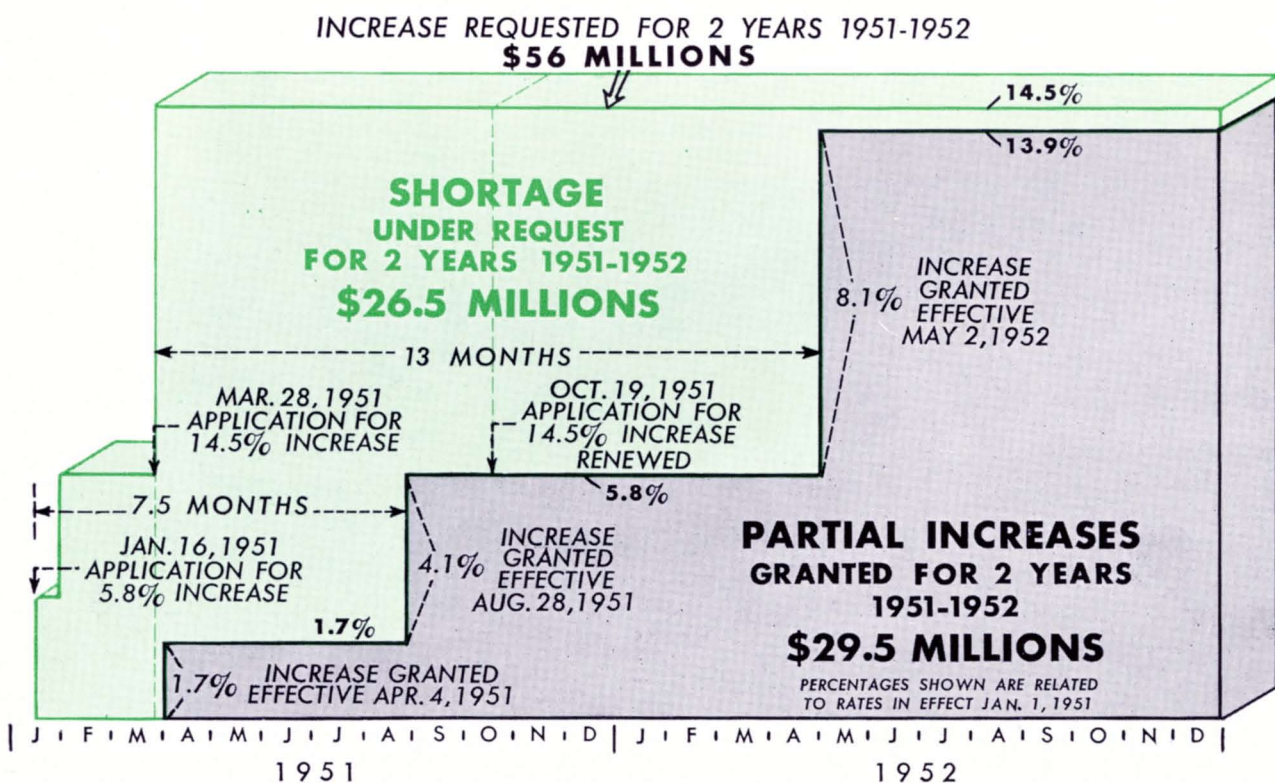
The Red River Valley of Minnesota-North Dakota, and the Klamath Basin in Oregon are the principal sources of potatoes. Potato loadings in 1952 were 25,722 cars, up 17% from 1951.

Petroleum products forwarded from Montana fields, outside of the Williston Basin, again increased, being 18,382 cars for 1950, 22,852 cars for 1951 and 26,746 cars for 1952.

Reflecting the short apple crop in the Fall of 1951, much of which moved in 1952, fruit loadings were off about 4,300 cars or 17% of the 25,163 cars handled in 1951.

The iron ore movement over the Allouez, Wis., docks lost 7.5 million tons during the miners' strike in June and July, 1952. Part of this loss was made up when production was resumed on July 28. Loadings progressed at record rates, final tonnage handled for the year being 25.8 million gross tons compared with 28.6 million gross tons for 1951. Top performances were registered in each month, August to November. Early in November 292,000 tons of ore were loaded into boats in a single day, an all-time record. The revenue from this traffic was 10.7% of Railway operating revenues in 1952.

FREIGHT RATES - INCREASES REQUESTED OF AND GRANTED BY INTERSTATE COMMERCE COMMISSION 1951-1952



GREAT NORTHERN'S SIMPLIFIED INCOME STATEMENT FOR 1952

GREAT NORTHERN TOOK IN:

For transportation of:	
FREIGHT	\$226,308,677
PASSENGERS	14,118,117
For other services	19,820,677
Total for services rendered	\$260,247,471
From dividends, interest, etc.	10,087,887
TOTAL INCOME	\$270,335,358

(1951—\$257,438,085)

IT COST GREAT NORTHERN:

For materials, rentals and other expenses for maintaining properties and conducting transportation	\$65,204,370
For replacement of properties as old wears out	11,502,866
For retirement and unemployment taxes	6,914,898
For all other taxes	31,141,494
For interest on long-term debt	7,835,012

THESE ITEMS TOTAL **\$122,598,640**

(1951—\$114,817,123)

LEAVING FOR EMPLOYEES, SHAREHOLDERS AND REINVESTMENT \$147,736,718 (1951—\$142,620,962)

GREAT NORTHERN DISTRIBUTED:

TO EMPLOYEES FOR WAGES AND SALARIES	\$120,032,059	(1951—\$118,674,762)
TO SHAREHOLDERS FOR USE OF THEIR MONEY	\$ 12,172,714	(1951—\$ 12,360,044)
TO RETIRE DEBT AND TO BE REINVESTED IN BUSINESS	\$ 15,531,945	(1951—\$ 11,586,156)

GREAT NORTHERN'S FINANCIAL POSITION AT END OF 1952

QUICK ASSETS:

Cash and special deposits	\$53,902,965
Due from agents, conductors and others	14,365,845
Material and supplies on hand	31,479,476
Total quick assets, readily convertible into cash	\$99,748,286

CURRENT LIABILITIES:

Employees' pay checks outstanding	\$ 6,004,010
Taxes not yet due	27,201,368
Bond interest due and paid January 1.	3,143,002
Other current liabilities	14,541,376
Total current liabilities	\$50,889,756

"WORKING CAPITAL":

The excess of quick assets over current liabilities

\$48,858,530 (1951—\$ 44,221,031)

GREAT NORTHERN'S INVESTMENTS:

Road, equipment and other property, less depreciation	\$604,456,387
48.59% of Chicago, Burlington & Quincy R. R. Co. stock	109,245,456
50% of Spokane, Portland and Seattle Ry. Co. stock and bonds	45,798,500
Unexpended proceeds from sale of equipment trusts	1,792,025
Other stocks, bonds, etc.	17,018,450
Deferred and unadjusted items	11,063,348

Total investments

\$789,374,166 (1951—\$788,132,560)

GREAT NORTHERN'S OTHER OBLIGATIONS:

To investors for bonds and notes outstanding	\$267,807,013
To all others	4,504,234

Total owed in addition to current liabilities

\$272,311,247 (1951—\$280,536,330)

NET WORTH:

"Working Capital" plus "Investments" minus "Other Obligations" ..

\$565,921,449 (1951—\$551,817,261)

CAPITAL STOCK **\$268,592,355** (1951—\$269,927,176)

RETAINED EARNINGS:

"Net Worth" minus "Capital Stock"—largely invested in the property

\$297,329,094 (1951—\$281,890,085)



2. PASSENGER SERVICE

For 1952 Passenger revenue amounted to \$14.1 million compared with \$13.5 million for 1951, notwithstanding a decrease in military traffic revenue of \$.3 million.

The 611 million revenue passengers carried one mile in 1952 was the largest volume in 5 years.

Special coach fares on the coast line between Portland, Ore., and Vancouver, B. C., were increased to 2 cents per mile, about 15%, on June 1 and August 1, but there was very little increase in the system average revenue per passenger mile of 2.29 cents for 1951 and 2.31 cents for 1952.

Effective February 26, 1952, the Western Star trains between Chicago and Seattle-Portland were re-routed to operate via Great Falls, Mont., giving the people in that community main line service for the first time. Reduction in supporting service resulted in a saving in train miles. Motor bus service was substituted for train service for the Empire Builder's connection between Havre, Mont., and Great Falls, Mont.

The net reduction in unprofitable passenger train service for 1952 amounted to 439 thousand train miles, which will total 577 thousand train miles for a full year. During the past three years unprofitable passenger trains having an annual mileage of over a million have been eliminated.

3. MAIL AND EXPRESS SERVICE

Mail revenue of nearly \$8.0 million for 1952 was less than the \$8.6 million reported for 1951. At the same time Express revenue increased from \$1.8 million for 1951 to \$2.7 million for 1952.

Part of this diversion of revenues is due to a readjustment in the relationship between parcel post and express rates, with reduced weight and size limits on parcel post restoring traffic to express service.

In addition, there was some loss in mail traffic through rearranging train schedules and discontinuing unprofitable passenger trains.

OPERATING EXPENSES

Railway operating expenses for 1952 were \$191.4 million, an increase of \$7.2 million over those for 1951, principally because of the higher wage rates from cost of living escalation. Details of Operating expenses are shown on pages 8 and 9 of the "Statistical Supplement" to this report.

The percentage of Railway operating revenues consumed by all Operating expenses in 1952 was less than 74% for the first time since 1944, with one exception. Transportation expenses, the actual cost of moving the traffic, including train, yard and station services, were 33.4% of the Railway operating revenues, the lowest ratio in the past 7 years.

Wage and salary payments charged to Operating expenses for 1952 amounted to \$120.0 million compared with \$118.7 million for 1951.

New diesel locomotives put in service raised the percentage of traffic handled by all locomotives other than steam (mostly diesels but including electric and motor cars) in 1952 to 66% for freight service, 99% for passenger service and 84% for yard

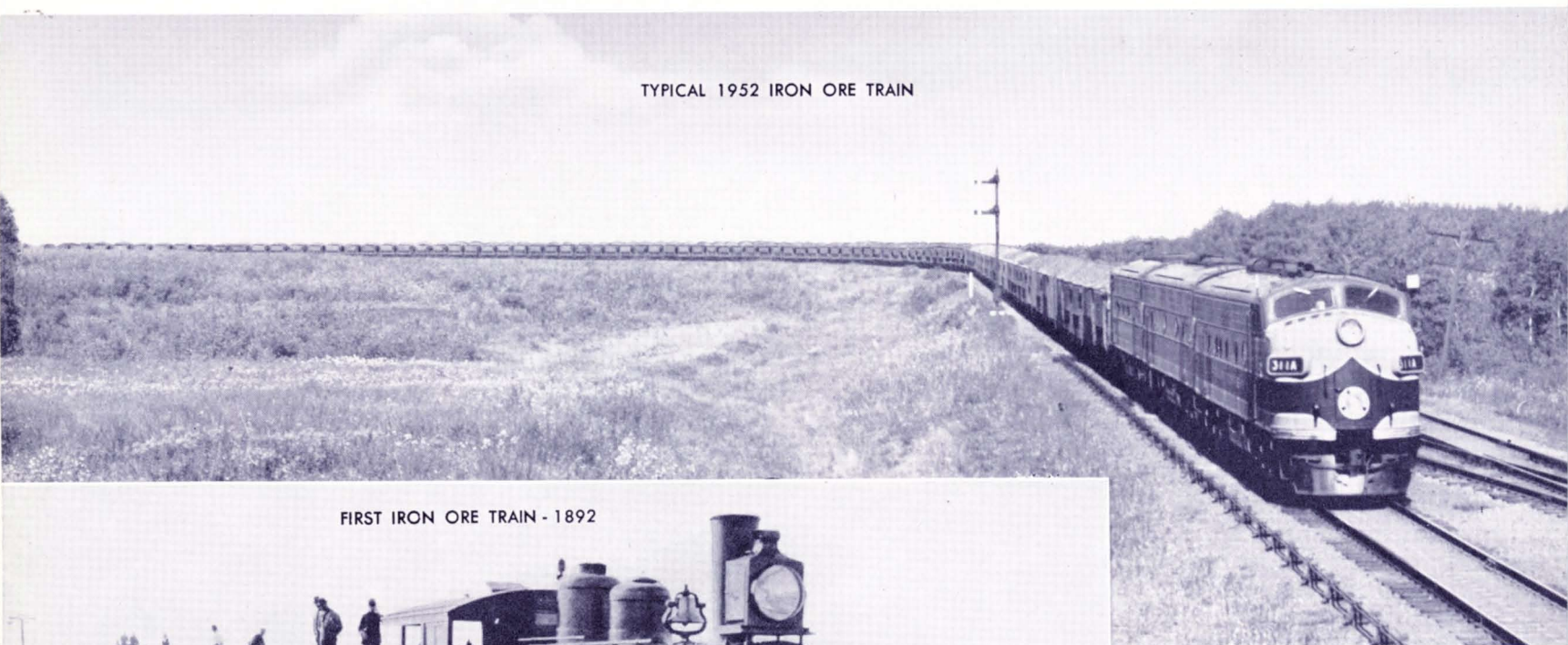
service. For 1951 these figures were 47%, 96% and 76% respectively.

The effect of the greater use of diesels, together with a lower price for fuel oil for steam locomotives, was to reduce locomotive fuel costs from \$13.0 million for 1951 to \$10.6 million for 1952, a saving of more than 18%.

The property was well maintained. In spite of shortages resulting from the steel strike nearly 28 thousand tons of new steel rail of 115-lb. per yard or heavier were applied. New ballast consisted of 640 thousand cubic yards of crushed rock and stone. Nearly 850 thousand new treated ties were installed. The percentage of treated ties in all tracks has increased steadily to 98% at the end of 1952 as shown by the graph on page 9. This means that annual replacements can be reduced to some 800,000 ties for the future compared with 1,000,000 or more in recent years. The crushed rock ballast program which greatly improves track conditions and reduces maintenance cost will be continued for a few years until all main lines have been covered.

Unserviceable equipment at the end of 1952 had been reduced to 9.8% for locomotives, 3.2% for freight cars and 2.8% for passenger cars — all considered favorable ratios.

TYPICAL 1952 IRON ORE TRAIN

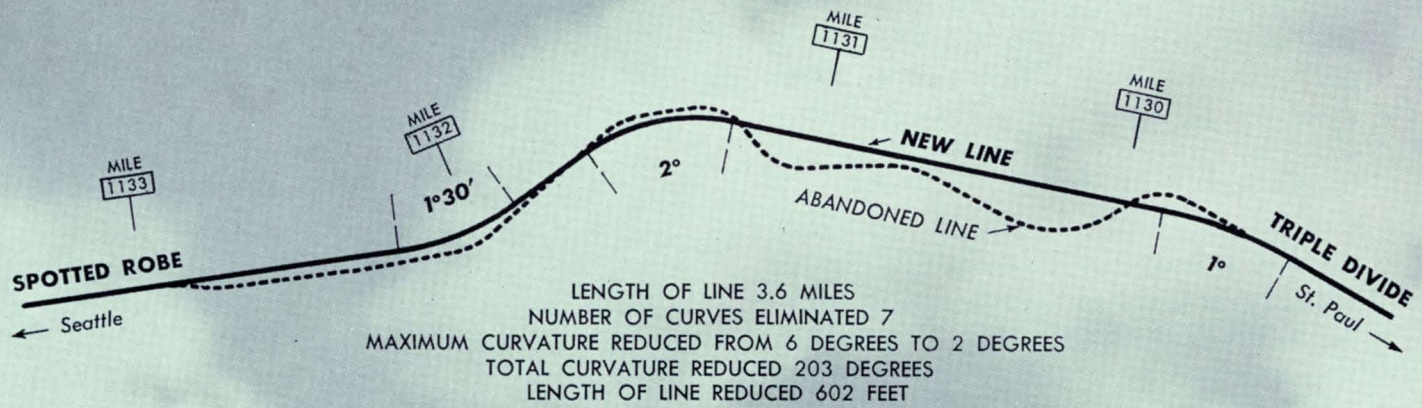


FIRST IRON ORE TRAIN - 1892



**1892-1952
SIXTY YEARS
DEVELOPMENT IN
IRON ORE
TRANSPORTATION**

3.6 MILE LINE CHANGE - TRIPLE DIVIDE - SPOTTED ROBE, MONTANA



FIRST TRAIN OVER NEW 1.2 MILE FILL - MAXIMUM HEIGHT 65 FEET - OLD LINE IN FOREGROUND

LABOR MATTERS

The total payroll increase for all classes of employes in 1952 was \$3.3 million.

On May 23, 1952, after a considerable period of negotiation, the nation's railroads signed an agreement with the unions representing the conductors, engineers and firemen. Similar agreements were made with other operating and non-operating unions. As a result, the President of the United States issued instructions, effective May 23, 1952, that the Army should relinquish control of the railroads which it had taken over on August 27, 1950 because of a threatened strike by some of the operating crafts.

It was agreed that until October 1, 1953, there would be a moratorium on rules changes. Rates of pay would change according to the Bureau of Labor Statistics' cost-of-living index. Since the beginning of 1952 these adjustments have been as follows:

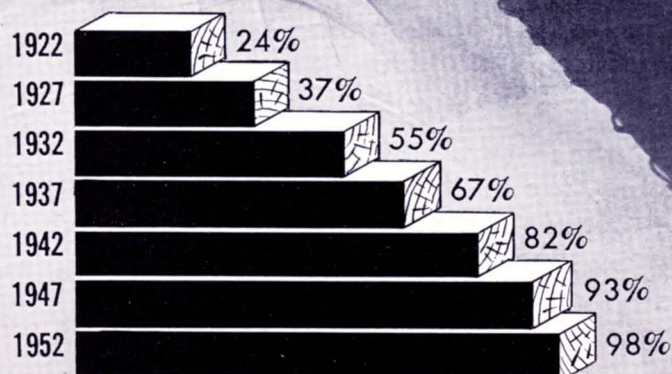
January 1, 1952, 4c per hour increase
April 1, 1952, 1c per hour decrease
July 1, 1952, 2c per hour increase
October 1, 1952, 2c per hour increase
January 1, 1953, 1c per hour decrease

Machinery was established for determining whether government wage stabilization policies permitted a so-called annual improvement wage increase; and, if so, the amount, if any, of such increase that was justified and

the effective date thereof. Doctor Paul N. Guthrie, Professor of Economics, University of North Carolina, was appointed by President Truman to act as Referee in this matter. The railroads presented a strong case to prove that no increase in wages was justified under any circumstances. On March 18, 1953, Dr. Guthrie reported his decision that the employes were entitled to 4c per hour retroactive to December 1, 1952. The organizations had requested an annual productivity increase of 6c per hour retroactive to October 1, 1950 or February 1, 1951, which would have meant an immediate increase of 18c per hour. The increase permitted is estimated at \$216,000 per month, or \$1,950,000 for the first nine months of 1953 before the agreement may be terminated. The employes have pressed the matter of increased productivity in wage cases for a number of years and this undoubtedly has been one of the factors considered by emergency boards, referees, etc., in awarding increased wages in previous cases.

Following the passage of permissive legislation by Congress, the railroads quite generally have negotiated so-called union shop agreements. Great Northern has consummated such agreements with most of the non-operating groups of employes which do not provide for check-off of union dues. Similar proposals for the operating groups (train, engine and yard service employes) are under negotiation.

PER CENT OF TREATED TIES IN ALL TRACKS



TIE TREATING PLANT — HILLYARD, WASH., ONE OF FOUR PLANTS
TREATING TIES FOR GREAT NORTHERN

TAXES

Taxes, which have been increasing each year since 1948, amounted to over \$38 million in 1952, an increase of \$1.2 million over those for 1951. Two-thirds of this increase or \$.8 million was for United States Income Tax due largely to the increase in tax rate from 50.75% to 52%. No accrual of excess profits taxes was necessary as the Net Income was substantially below the excess profits range.

The 1952 payroll taxes were \$6.9 million. As of January 1, 1952, the Railroad Retirement payroll taxes were increased from 6% to 6¼%. The unemployment insurance tax is an additional ½%. Both rates apply to the first \$300 per month paid each employee, and are far more than are paid by industries operating under Social Security.

AMORTIZATION OF EMERGENCY FACILITIES

The Federal government has authorized for tax purposes the amortization over a 60-month period of \$34.1 million of the \$54.5 million cost of facilities found necessary in the interest of national defense. This is in lieu of normal depreciation.

The Interstate Commerce Commission rules prohibit charging amortization in the accounts. In computing the U. S. Income tax under the Internal Revenue Code, this amortization is substituted for the normal depreciation charged in the accounts under Interstate Commerce Commission rules. This decreases the Income tax and correspondingly increases the Net Income.

In 1952 tax amortization of \$4.1 million was considered in accruing income taxes. The normal depreciation on the same facilities, as charged in the accounts, was \$.8 million. The U. S. Income tax accrued was \$18.7 million. Without tax amortization accounting this would have been \$20.4 million and the reported Net Income would have been reduced \$1.7 million or \$.56 per share. Similarly, for 1951 without tax amortization the Net Income would have been reduced \$.5 million or \$.18 per share.

After the 60-month amortization period has expired the normal depreciation charge will continue in the income account, but will not be allowed in determining the income tax. Income

taxes will be greater and Net Income reduced for those years.

In other words, the accounting prescribed by the Interstate Commerce Commission has the effect of increasing the Net Income during the 5 year when amortization is taken for tax purposes and decreasing the Net Income after the 5-year period has expired. The tax reduction now being realized is not a tax saving but only a tax deferment.

MESABI RANGE IRON ORE

The deposits of iron ore in northern Minnesota and northern Michigan have been the principal sources of that mineral in the United States for many years. Your Company serves the western section of the Mesabi Range and handles about one-third of the total tonnage loaded at Upper Lake ports. While iron ore composes roughly 50% of the total tonnage handled by Great Northern, the revenue from this traffic is only about 11% of Railway operating revenues.

There are two broad classes of iron ore first, merchantable ore and second, taconite of low iron content. All ore shipped up to date has been merchantable ore, although some has been concentrated or otherwise beneficiated. Increased demand for steel and large furnace capacity has stepped up iron ore production during the past 10 years and caused some concern about the life of the ore bodies in the Upper Lakes region.

As shown by the chart on page 11 there were shipped from the Mesabi Range for the 10 years ended in 1951 a total of 611.6 million tons of merchantable iron ore. During that same period the decrease in reserves, other than taconite, as determined by the State of Minnesota Department of Taxation was 216.4 million tons or 35%. For the latest five-year period ended in 1951 shipments totaled 309.2 million tons, with a decrease in reserves of 67.8 million tons or 22%.

If these conditions obtain for the future, the indicated life of the merchantable iron ore on the Mesabi Range gives little cause for alarm.

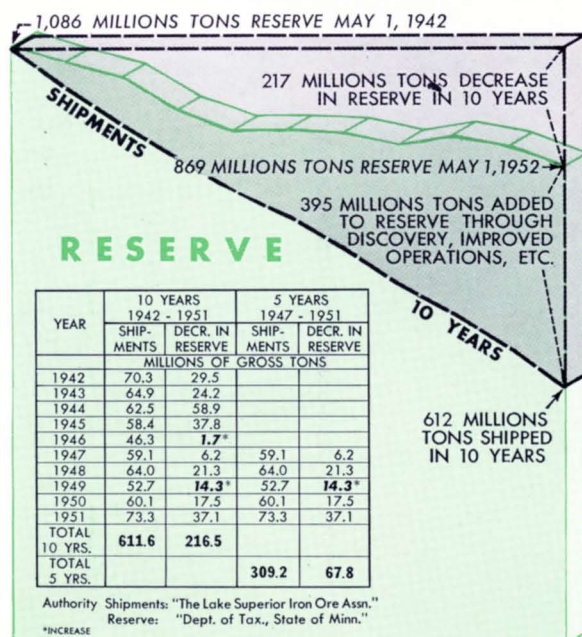
There were no startling discoveries of ore during the last 10 years but rather a continuing addition to the known recoverable ore bodies year by year. New and improved mining machinery and methods make possible the operation of high cost properties that would otherwise be undeveloped and the recovery of additional tonnages of ore that previously had been considered too deep to be considered commercial. In addition, it is not desirable to block out prospective tonnages too far in advance of mining because of the cost of developing the information from expensive drilling and the penalty of having the additional proven tonnage added to the tax rolls.

In 1948 Great Northern engaged a competent engineering firm to determine the future of the Mesabi Range. They concluded that there was no need for concern about shipments of iron ore from the Mesabi Range for many years to come.

There are huge tonnages of low grade taconite in this area and important commercial development is now taking place. While not as yet affecting Great Northern directly, the advancement in the science of treating taconite is expected to expedite the ultimate exploitation of these ores in the territory tributary to your railroad.

As evidence of Great Northern's confidence in the Mesabi Range, 700 new ore cars were added to the fleet in 1952, together with new diesel locomotives for ore train and yard movements and other facilities for improving services.

MERCHANTABLE IRON ORE MESABI RANGE EXCLUDING TACONITE



INDUSTRIAL DEVELOPMENT

Industrial development continued throughout 1952, with 270 industries locating on Great Northern property, including grain elevators; warehouses handling fruit and vegetables; grocery, hardware and other distributing businesses. Some of the more important developments from a revenue producing standpoint are:

1. A large wholesale grocery warehouse at Minneapolis, Minn., costing \$1 million.

2. A \$10 million sugar refinery and warehouse for handling sugar beets near Crookston, Minn., under construction.

3. Oil loading racks and supply houses in the Williston Basin of North Dakota and eastern Montana.

4. A new \$45 million aluminum reduction plant in western Montana, under construction, with production scheduled for 1954.

5. The first water received on the Columbia Basin Irrigation Project in Washington, pictured and described on pages 16 and 17 of this report.

6. A new 88,500 ton (annually) aluminum reduction plant placed in operation in eastern Washington in 1952.

7. Lumber mills, and a cold storage plant along Puget Sound.

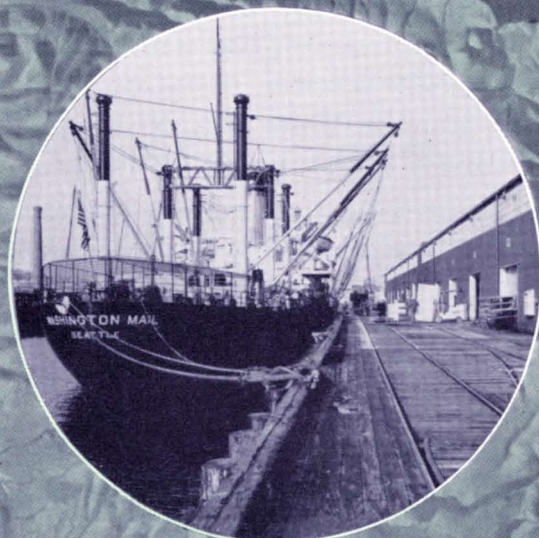
8. New can plant and warehouses near Vancouver, B. C.

9. New hardboard plant under construction at Klamath Falls, Ore.

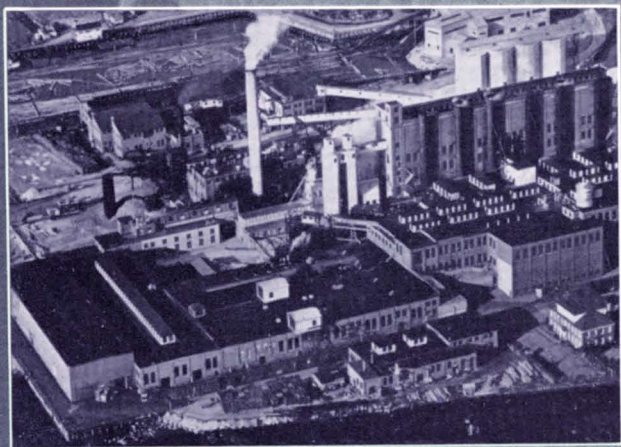
Your Company owns important industrial property in Seattle, Wash., known as the Seattle Tidelands. During 1952 this property was filled to bring it to grade and make it available and more desirable for industrial sites. The filling totaled approximately 520,000 cubic yards.

To provide property for future industrial sites acquisition of over 1500 acres at fifteen different stations has been authorized since January, 1952. This property is located in Minnesota, North Dakota, Montana and Washington, mostly at main line points.

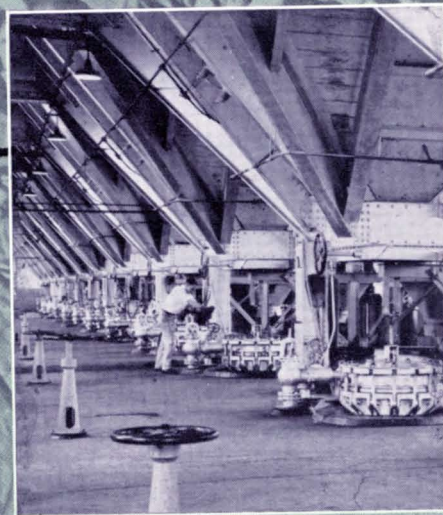
Great Northern Railway Co. Salutes the Great Agricultural and Industrial STATE of WASHINGTON



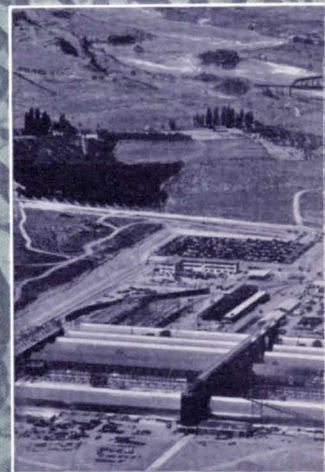
CONNECTION WITH FAR EAST THROUGH
1,500 FOOT GREAT NORTHERN DOCK—SEATTLE



LUMBER AND PLYWOOD MILL—LONGVIEW



MILL FOR MAKING PAPER—BELLINGHAM—EVERETT



NEW ALUMINUM PLANT



OCEAN

PACIFIC

BELLINGHAM

EVERETT

SEATTLE

TACOMA

GREAT NORTHERN RY.

LONGVIEW

PORTLAND

S. P. & S. RY.

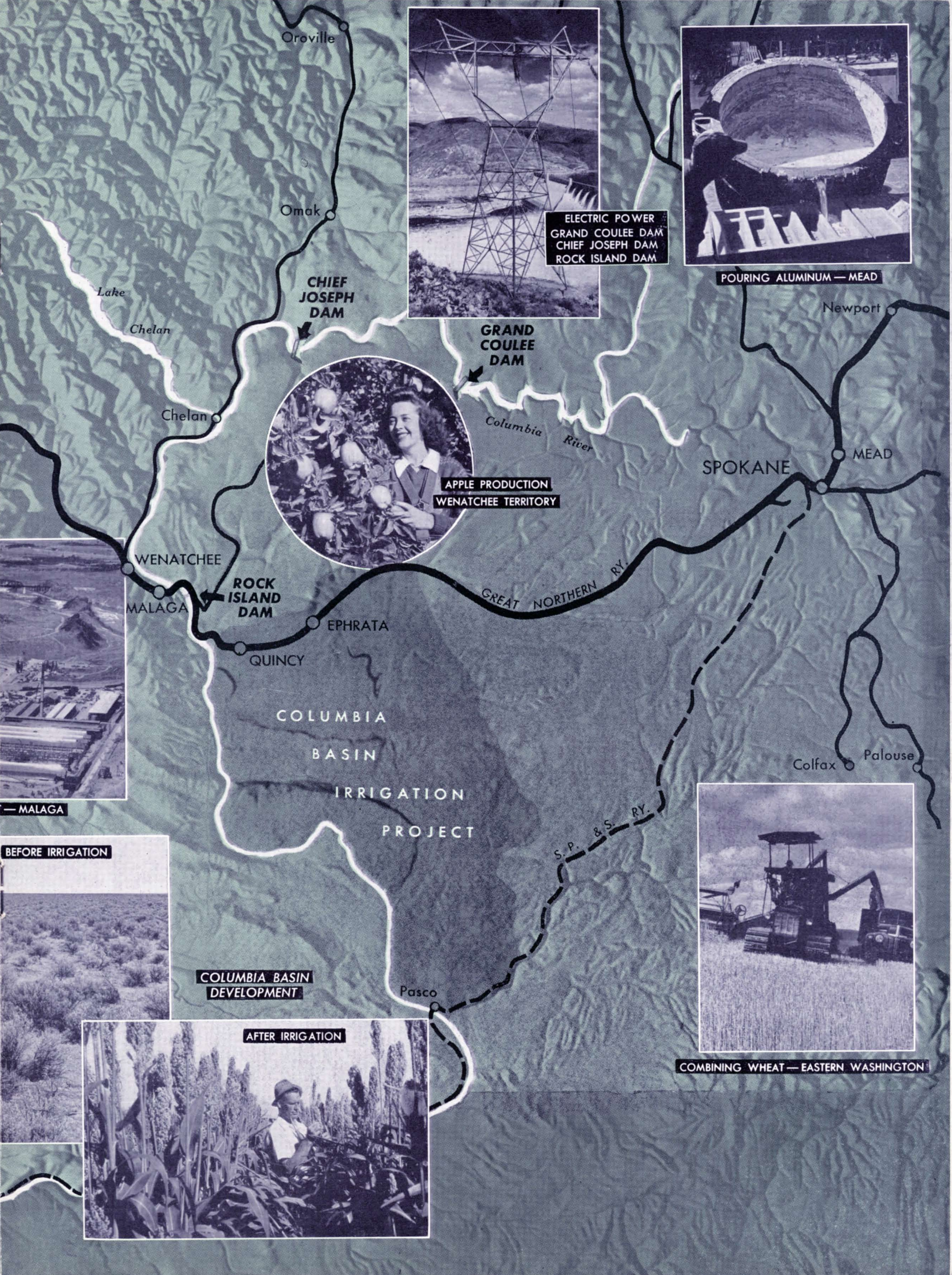
Wishram

Columbia River

Puget Sound

GREAT NORTHERN RY.

CASCADE TUNNEL



Oroville

Omak

Lake

Chelan

Chelan

WENATCHEE

MALAGA

ROCK ISLAND DAM

CHIEF JOSEPH DAM

GRAND COULEE DAM

Columbia River

APPLE PRODUCTION
WENATCHEE TERRITORY

EPHRATA

QUINCY

COLUMBIA
BASIN

IRRIGATION
PROJECT

Pasco

Colfax

Palouse

Newport

MEAD

SPOKANE

GREAT NORTHERN RY.

S. P. & S. RY.

ELECTRIC POWER
GRAND COULEE DAM
CHIEF JOSEPH DAM
ROCK ISLAND DAM

POURING ALUMINUM — MEAD

— MALAGA

BEFORE IRRIGATION

COLUMBIA BASIN
DEVELOPMENT

AFTER IRRIGATION

COMBINING WHEAT — EASTERN WASHINGTON

WILLISTON BASIN OIL

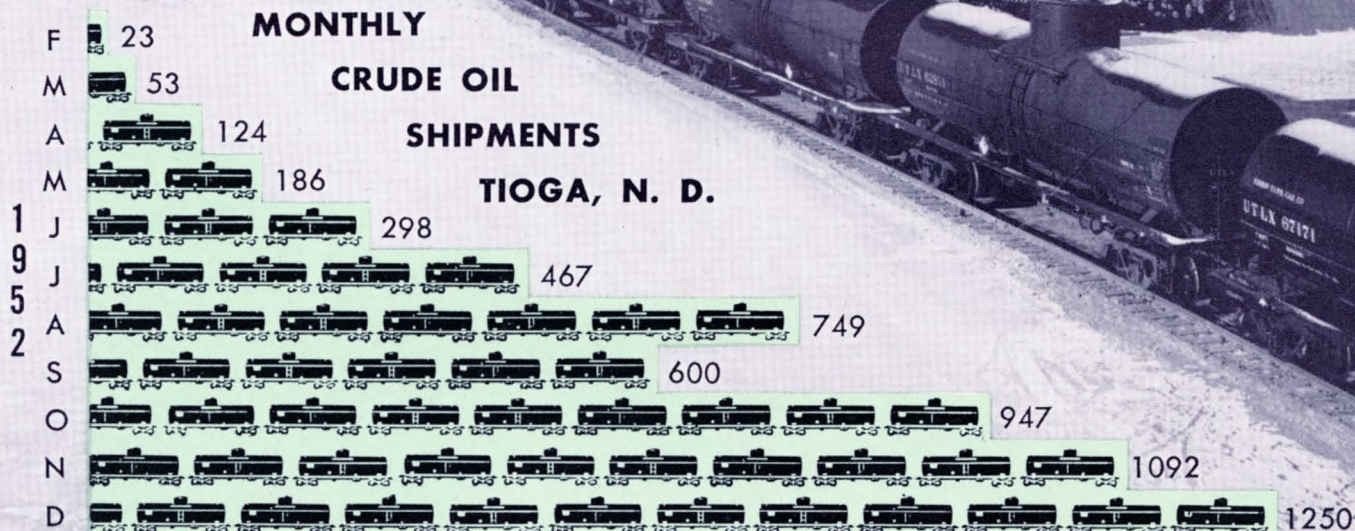
Although oil was discovered in the Williston Basin in the spring of 1951, there was no significant production until 1952 when the promising discoveries of the previous year became commercial realities.

By the end of 1952 there were 108 producing wells in Great Northern territory, 90 in North Dakota and 18 in Montana. Crude petroleum shipments from 4 stations in this area over your railroad have been increasing steadily and are currently in excess of one-half million barrels or 2,000 cars per month. Most of this oil is destined to refineries near Spokane, Wash., St. Paul, Minn., and Chicago, Ill. There was also a substantial inbound movement of oil well equipment and supplies, which is continuing into 1953 as drilling is extended.

Plans are being made for the construction of an oil refinery near Bismarck, N. D.,

approximately 100 miles south of Great Northern's main line. Crude oil will be gathered from the Williston Basin by pipeline which will largely eliminate rail shipments from this area. It is anticipated that refinery operations may begin late in 1954.

Announcement has also been made of the proposed construction of a plant to be served by Great Northern at Tioga, N. D. to extract propane, butane, sulphur, etc., by utilizing the wet gas now being burned. The cost with gathering lines is estimated at \$15 million. These products together with the substantial quantities of lignite, salt and sodium sulfate in the region give promise of an important industrial future for Great Northern territory in the Williston Basin.





ALL-PURPOSE, HEAVILY INSULATED, MECHANICAL REFRIGERATOR CAR, CAPABLE OF MAINTAINING ANY FIXED INSIDE TEMPERATURE OF ZERO DEGREES OR OVER, BY FURNISHING HEAT OR COLD AS NEEDED. WESTERN FRUIT EXPRESS CO. IS A WHOLLY-OWNED SUBSIDIARY OF GREAT NORTHERN RAILWAY CO.

POWER PROJECTS

Construction continued on power projects local to Great Northern territory during 1952. At the end of the year the situation was as follows:

Hungry Horse Dam on the South Fork of the Flathead River in northwestern Montana. The 564-foot high dam was completed during 1952 and two generators were placed in service. The high voltage transmission line was also finished in 1952 and power is now going out over this line into the Bonneville Power Administration grid system. Two additional generators scheduled for 1953 will complete the installation with a power plant capacity of 285,000 kilowatts.

Albeni Falls Dam on the Pend Oreille River in northwestern Idaho. This is a multi-purpose project for power, flood control and irrigation.

It is now one-third completed, with power scheduled for the latter part of 1954. Total capacity is to be 251,000 kilowatts.

Rock Island Dam, Columbia River near Rock Island, Washington. This is the first power dam on the Columbia River and was completed in 1931. The new work contemplates raising the level of the dam and installing six additional power generating units. Three of these were energized in 1952 and the other three are scheduled for operation during the first half of 1953. The additional power plant capacity of all six units is 165,000 kilowatts, raising the total capacity to 245,000 kilowatts.

Chief Joseph Dam, on the Columbia River in north central Washington. Third stage construction consisting of the power house and intake structure was begun in 1952 and power generation is scheduled for late in 1955 with 256,000 kilowatts. The ultimate generating capacity is to be 1,728,000 kilowatts.

COLUMBIA

Water to land through
canals and laterals

27 mile equalizing reservoir

North dam

Canal

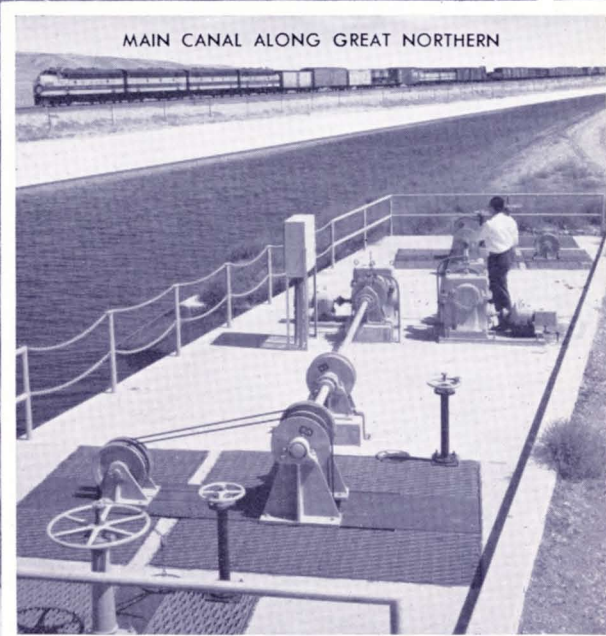
To reservoir

Water lifted 280 ft.
through penstocks
to canal

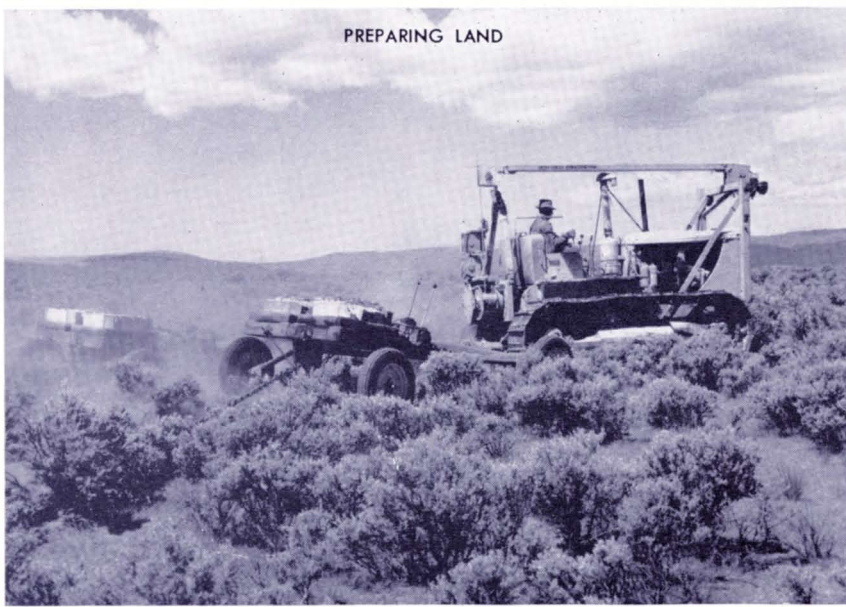
Grand Coulee Dam

AERIAL VIEW LOOKING SOUTH

MAIN CANAL ALONG GREAT NORTHERN



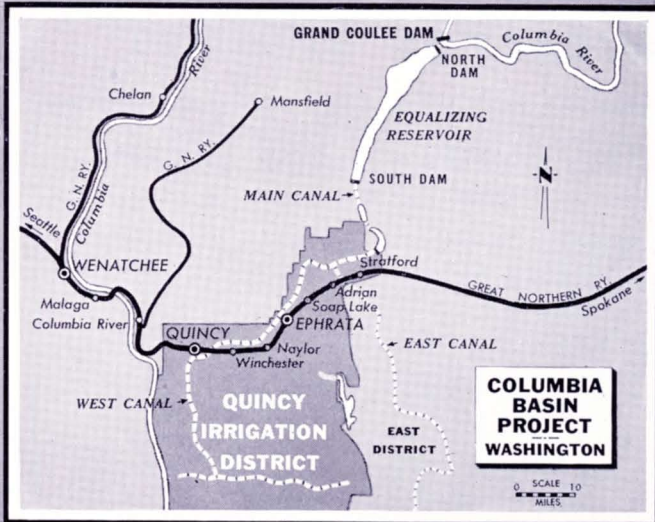
PREPARING LAND



CROP PRODUCTION UNDER IRRIGATION



BASIN IRRIGATION DEVELOPMENT



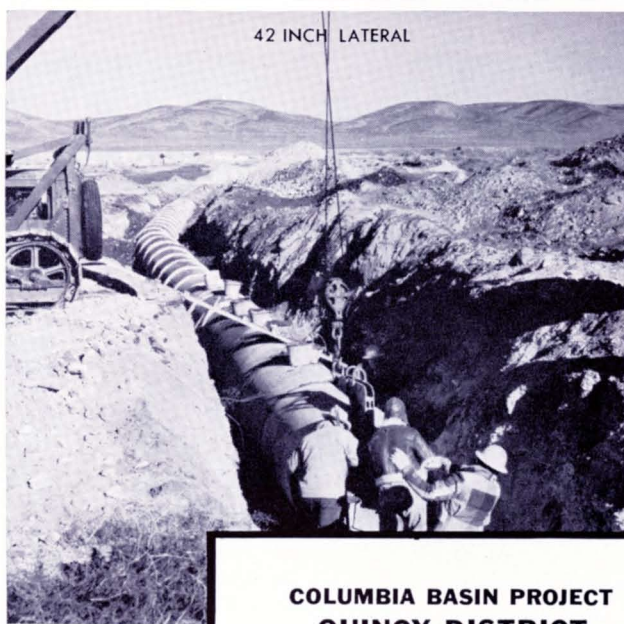
The pictures and map indicate how this project has been developed. Huge pumps powered by current from Grand Coulee Dam lift the water 280 feet from back of the dam through penstocks 12 feet in diameter to the canal whence it flows into an old river bed of the Columbia River. Dams at the upper and lower ends form an equalizing reservoir or lake 27 miles long. Two main arteries with siphons will carry the water from this reservoir some 15 miles to the nearest land to be irrigated which is along the Great Northern main line. There will be over 4,000 miles of main and secondary laterals when the entire project is completed.

THE QUINCY DISTRICT

There are three main irrigation districts, the Quincy District comprising some 286,000 acres being served almost exclusively by Great Northern. Water was received on the first acreage in this district in 1952, approximately 19,000 acres. The impact of agricultural production will begin to assume importance by 1957 when the farm rotation schedules have been through one cycle, when livestock numbers have been built up, when fruit trees begin to bear and other factors governing a substantial production have become stabilized.

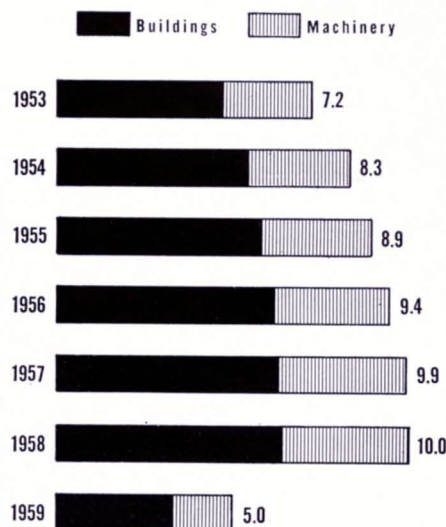
It has been estimated that when the Quincy District is fully developed it will include an additional 3,300 farm families. Experience in other irrigation projects has shown that at least the same number of urban families will be needed to provide for the needs of this rural population, and that there will develop a substantial inbound commodity movement to support these people.

Products of this district will include potatoes, alfalfa, sugar beets, beans, fruit, livestock, etc.



COLUMBIA BASIN PROJECT QUINCY DISTRICT

Contiguous to Great Northern
ESTIMATED EXPENDITURES BY YEARS
FOR MACHINERY AND BUILDINGS
IN MILLIONS OF DOLLARS



VOLUME OF TRAFFIC AND OPERATING AVERAGES

ITEM	1952	1951	1950	1949	1948
REVENUE NET TON MILES (1000's).....	17,518,226	18,041,425	16,047,498	15,380,005	16,399,435
PASSENGERS CARRIED ONE MILE (1000's).....	612,030	589,519	494,307	501,964	542,792
TRAIN LOAD—NET TONS ALL FREIGHT.....	1,384	1,426	1,364	1,333	1,345
FREIGHT LOCOMOTIVE MILES PER LOCOMOTIVE DAY	82.5	83.2	82.6	82.7	84.4
FREIGHT CAR MILES PER CAR DAY.....	48.1	51.6	47.0	45.7	48.6
NET TON MILES PER FREIGHT CAR DAY.....	1,123	1,234	1,074	1,010	1,092
REVENUE PER NET TON MILE (cents).....	1.292	1.195	1.219	1.197	1.140
REVENUE PER PASSENGER MILE (cents).....	2.307	2.290	2.239	2.328	2.331
NET TON MILES PER TRAIN HOUR.....	22,690	22,578	21,150	20,621	21,072

GREAT NORTHERN'S FIRST DIESEL IN 1926



FIVE HUNDREDTH DIESEL UNIT RECEIVED IN 1952

OTHER IRRIGATION PROJECTS

In addition to the Columbia Basin Irrigation Project in central Washington, two other local irrigation districts in Great Northern territory were progressed during 1952.

The Lower Marias Project will be served by the Tiber Dam located on the Marias River 14 miles south of Chester in north central Montana. Construction contract for \$12.8 million has been let and full scale operations will begin in the spring of 1953. The area to be irrigated will comprise 127,000 acres east of the dam site along Great Northern line between Assiniboine and Big Sandy, Mont.

Work is now under way clearing ground for the Missouri-Souris Diversion Dam on the Missouri River, four miles south of Fraser in northeastern Montana. The dam will be an earth fill embankment 2.3 miles long with concrete over-flow section. Considerable work must be done in organizing an irrigation district and developing a satisfactory repayment contract before the project can be completed and the 100,000 acres to be benefited can be put under water.

PROPERTY IMPROVEMENTS

A railroad is not a static industry. New money must constantly be spent on improving the fixed property and securing new equipment. The necessity of acquiring new diesel locomotives and abandoning steam operations during the past few years has demanded a larger capital improvement program than usual. The economies realized from this change have made it attractive aside from the need to preserve the favorable competitive position now enjoyed. Continuance of the diesel program is planned for the next few years.

Cash expenditures on property improvements, in millions, in recent years have been:

Year	Fixed Property	Equipment	Total
1952	\$10.3	\$25.4	\$35.7
1951	10.7	19.2	29.9
1950	7.8	27.0	34.8

1. FIXED PROPERTY IMPROVEMENTS

Work on the Triple Divide-Spotted Robe change in line was completed in 1952; a new freight station at Sioux City, Iowa, was finished; complete modernization of the Fergus Falls, Minn., depot; yard track construction in Minneapolis, Minn.; extending and rearranging ore steaming lines and providing car shakeouts for ore docks at Allouez, Wis.; and industrial track connections at various locations.

2. NEW EQUIPMENT

In 1926 Great Northern was one of the first railroads to adopt the diesel locomotive for heavy traction. During 1952 new diesel units received increased the number in service to over 500, exceeding in number the 433 steam locomotives in service at the end of the year for the first time.

Twenty-eight diesel locomotives comprising 47 units were received in 1952. Freight car equipment included 1,335 fifty-ton all-steel box cars built in Company shops and purchases of 700 seventy-five-ton ore cars, 250 seventy-ton gondola cars, and 50 express refrigerator cars.

Scheduled for 1953 delivery are 500 box cars, 300 hopper cars, 200 flat cars, 100 covered hopper cars, and 25 diesel locomotives of 37 units.

Western Fruit Express Company, a wholly-owned subsidiary owning and operating refrigerator cars, placed in service in 1952 a total of 300 new heavily insulated cars and 350 additional cars are scheduled for 1953 delivery. Sixty of these cars will be all-purpose heavily insulated, mechanical refrigerator cars capable of maintaining any fixed inside temperature of zero degrees or above by furnishing heat or cold as needed. The picture of this car is on page 15. The other cars are all designed for possible future conversion to mechanical refrigeration.

Experimental mechanical refrigerator cars have been operated a total of over 7 million loaded car miles without the loss of a single shipment through failure of refrigeration.

FUNDED DEBT

There was no change in the general mortgage bonds outstanding during 1952 of \$203,662,900, although \$11,700,900 of Series "B" 5½% Bonds were retired during 1951 and most of this reduction occurred in December of that year.

There was a reduction of \$7,511,627 in equipment obligations outstanding during 1952 as a result of the serial pay off on this paper. At the end of 1952 the equipment obligations were \$62,784,113.

On December 4, 1952, \$8,520,000 of equipment trust certificates were sold through competitive bids to provide in part for the cost of equipment to be delivered in 1953. These certificates were sold on the usual basis of 80% of the cost of the equipment with repayment in from 1 to 15 years. The successful bid was for a 2⅞% coupon at a discount which made the net interest cost to the Company 2.91%. As the certificates will be dated January 1, 1953, they are not included in the Statistical Supplement to this report with the exception of the projected principal payments maturing on equipment obligations by years from 1953 to 1967, inclusive, on Page 7 of that supplement.

LINE ABANDONMENT

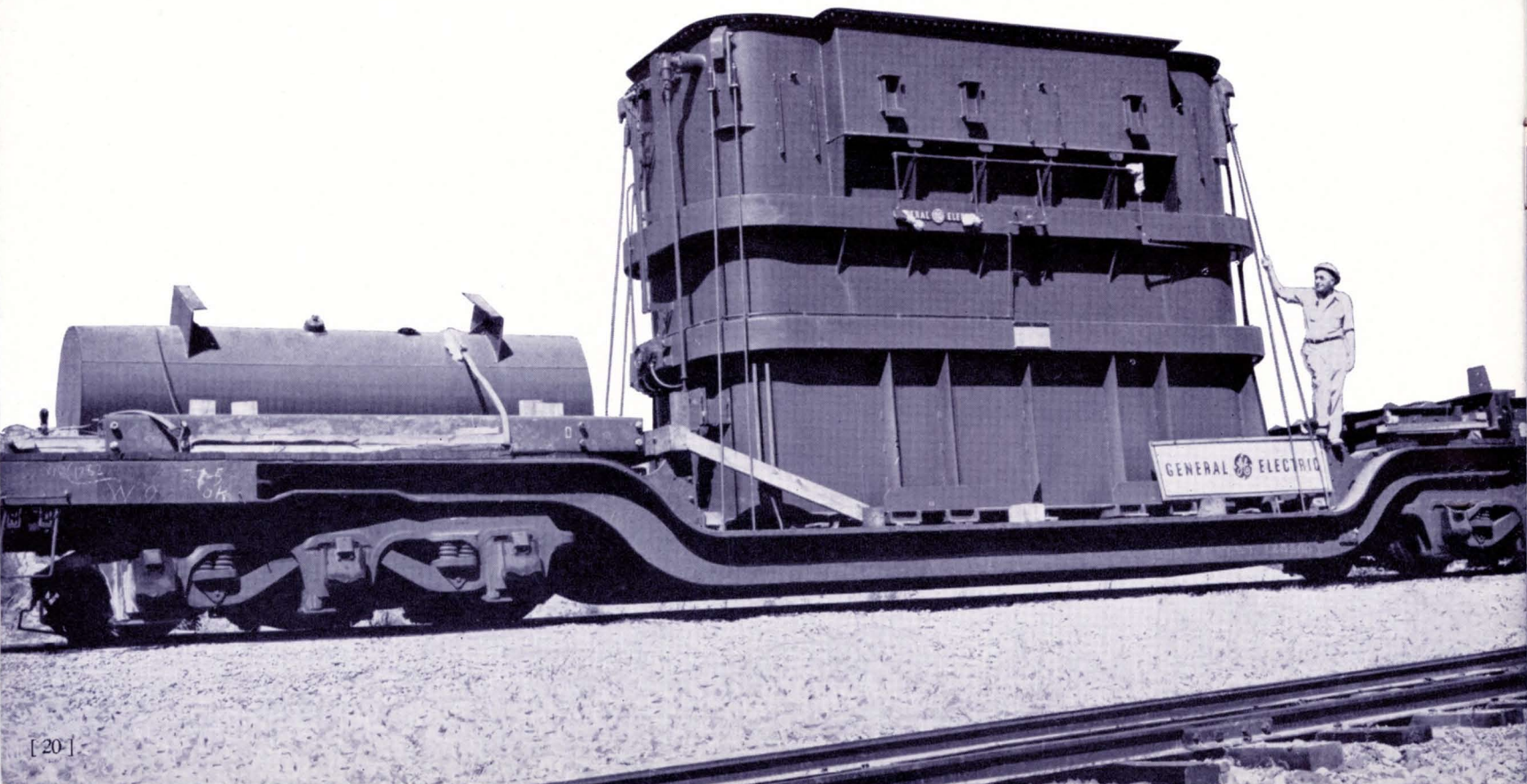
Permission was obtained from the Interstate Commerce Commission to abandon 20 miles extending from Kila to Hubbard, Mont., at the end of a branch line. The line has been serving a timber area but traffic decreased in 1951 to some 6 cars per month, mostly pulpwood. The line was difficult to maintain due to heavy grades, excessive curvature and long and high timber bridges due for renewal. By abandoning the line the operating losses are eliminated as well as an expenditure of \$400,000 for rehabilitation. The salvage value of material recovered is \$100,000.

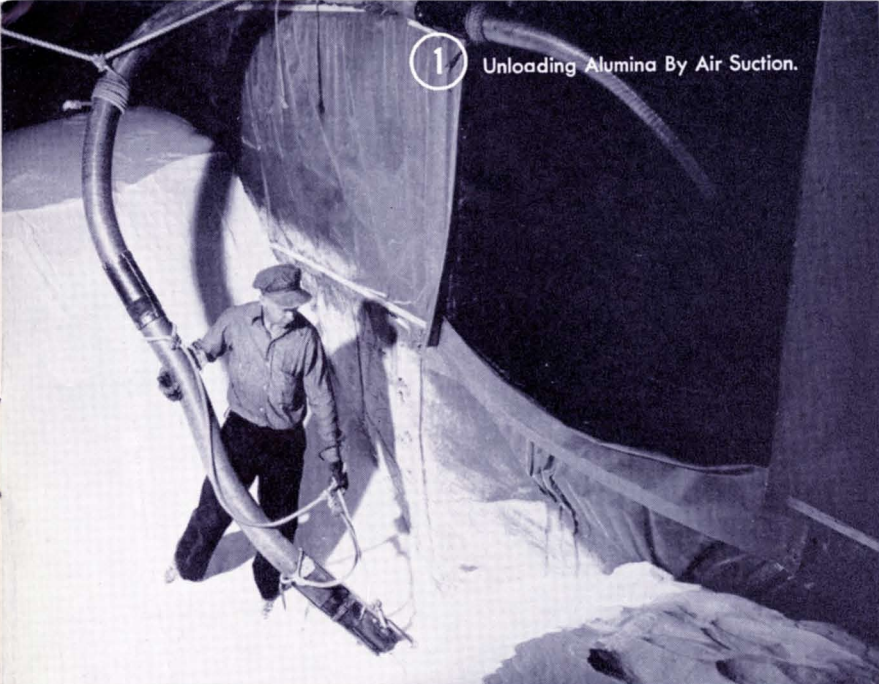
GLACIER NATIONAL PARK

Although there was a falling off in the special party business arriving by train at Glacier National Park during 1952, other train arrivals increased slightly. The house count at all hotels, chalets and camps covering the overnight guests showed an increase of 11%.

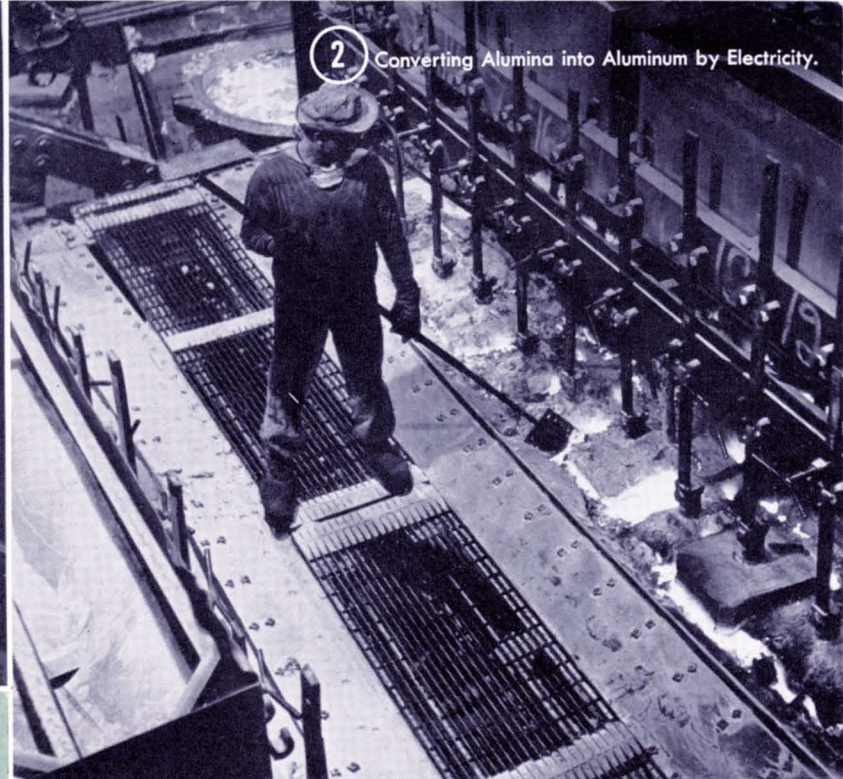
The long-term lease and concession contract with the Federal government for operation of hotels, chalets and automobile camps in Glacier National Park expired at the end of 1951. Operations were continued during 1952 on a one-year extension of this contract. For 1953 a further extension of one year has been agreed to.

GREAT NORTHERN HANDLES HUGE TRANSFORMER FOR ROCK ISLAND DAM.





① Unloading Alumina By Air Suction.

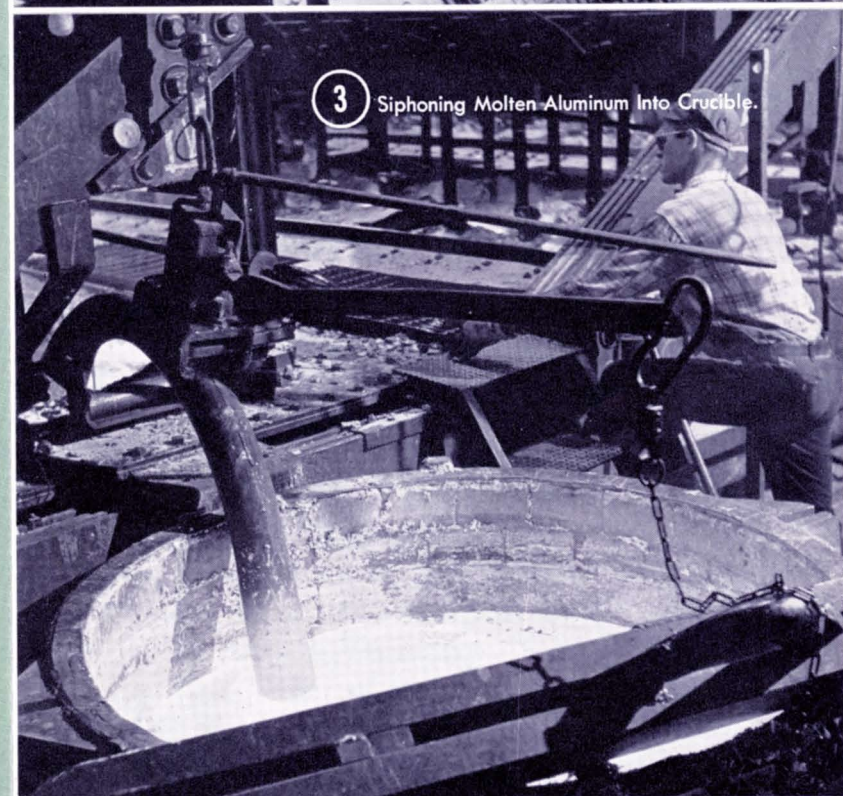


② Converting Alumina into Aluminum by Electricity.

ALUMINUM PLANTS

Aluminum plants at six different points have been established along the Great Northern line (including one plant under construction) taking advantage of low cost electric power. Three of the plants are at local points not competitive with other railroads, and one of these, with eight potlines and a capacity of 175,000 tons annually, is the largest aluminum reduction plant in the United States.

Most bauxite ore originates in British Guiana and Jamaica and is transported by ship to Gulf Coast points, although some originates in Arkansas. It is first reduced to alumina, a fine white powder, and transported by rail to the aluminum plants west of the continental divide. The pictures show some of the steps in converting alumina into aluminum by electricity. The pig aluminum must subsequently be rolled into sheets and fabricated, generally at other locations.



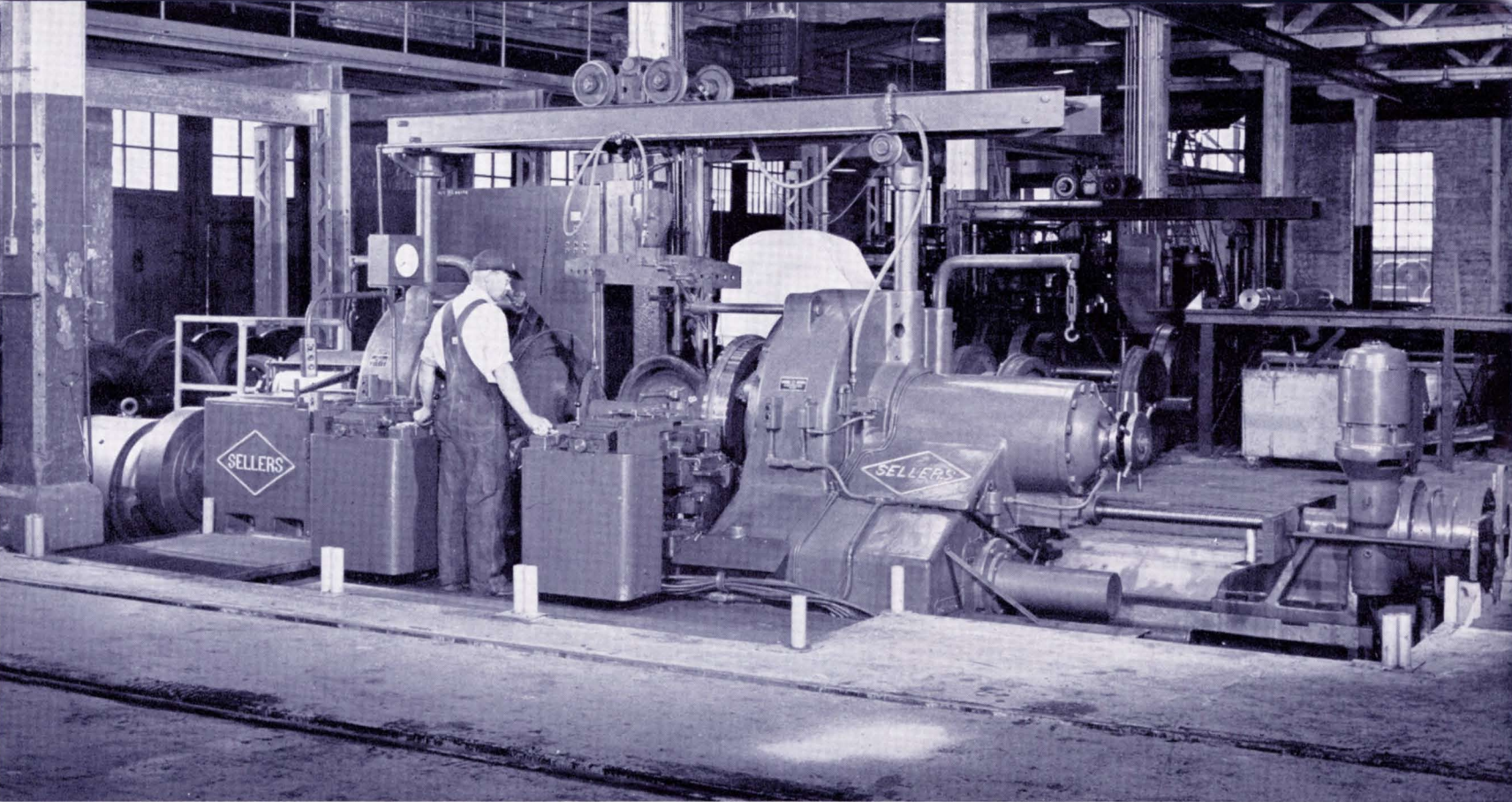
③ Siphoning Molten Aluminum Into Crucible.



④ Pouring Aluminum Ingots From Crucible.



⑤ Removing Aluminum Ingots From Mold.



LATHE IN NEW WHEEL SHOP.

STOCK OPTION PLAN

All officers and key employes are shareholders or have option rights. The Board of Directors believes that this acts as an additional incentive, induces continuity of service and is in the interest of the Company and its shareholders.

As of December 31, 1952, there were outstanding 3,044,432 shares of capital stock with 60,026 additional shares held by or for the Company. Of this last amount, 46,040 shares were held against unexercised options granted to officers and key employes under the restricted stock option plan, only 7,840 shares of which could be issued at the end of 1952.

During 1952 there were issued 1,870 shares of capital stock under the stock option plan at a price of $47\frac{5}{8}$ per share, the highest price at which the stock sold on the day the stock options were issued, February 26, 1952. Options are exercisable 20% on that date and 20% on each anniversary date until February 26, 1956, with final rights expiring on February 26, 1962, or 90 days after death or retirement under the Company pension plan. All rights expire immediately upon leaving the service for any other cause.

PENSION PLAN

In line with the trend in the railroad and other industries, the Board of Directors on October 29, 1952, amended the Pension Plan in the following particulars:

(1) Monthly pension to be $1\frac{1}{2}\%$ of average monthly earnings received during the last 5 years of compensated service for each year of continuous service. The former basis was 1% of average monthly earnings during the last 10 years of compensated service.

(2) Maximum pension payment limited to 60% of average earnings during the last 5 years of compensated service including amount received from Railroad Retirement Board. The previous maximum pension payment was \$15,000 exclusive of amount received from Railroad Retirement Board.

The normal cost of the revised plan is estimated at \$513,000 per year charged in the Income account to Operating expenses. In addition, the past service liability may be liquidated by the payment to the Trustee of \$682,000 per year over 30 years charged to Profit and Loss account. The Director of Internal Revenue has approved both payments as deductible for determining the United States Income Tax.

PUBLIC RELATIONS

Great Northern fitted up a blood procurement car which, together with the adjoining baggage car for supplies, has been collecting blood for the Armed Forces, outside of the main centers of population in Minnesota, North Dakota, South Dakota and Wisconsin, beginning in the Spring of 1952.

The car was named for Pfc. Richard Vincent Whalen, the first Great Northern employee to be killed in Korea. It has been staffed by the Red Cross and up to the present time has collected more than 18,000 pints of blood, nearly 20% of the total blood collected in the 4-state area.

Copy of "Your Rugged Constitution", an educational publication of the Stanford University Press on the Constitution of the United States of America, was distributed to employees upon request late in 1952, a total of 12,000 copies being sent out.

AWARDS

During the year 1952 the following awards were received by your railroad:

1. E. H. Harriman Memorial Certificate of Commendation for safety leadership among Class A railroads in the Western District.
2. The National Safety Council's Award of Honor for establishing a disabling injury rate significantly lower than the industry average.
3. Annual award for Outstanding Achievement in Progressive Passenger Service.
4. "Oscar of Industry" award for best annual report of Northwestern Railroads, 1951.
5. Mr. H. Neiswender, night depot ticket agent at Spokane, Wash., was named "Railroad Man of the Year" for his program of interesting school children in railroading in general and the Great Northern in particular during his spare time.

RAIL LAYING ASSEMBLY LINE



LITIGATION

Other than the usual litigation, there are two extraordinary cases still unsettled. One is an action by the Federal government to recover from the railroad industry charges for movement of traffic in World War II which are claimed to be excessive.

The other is an action by Montgomery Ward & Co. against railroads and truck lines operating into Portland, Ore., for damages claimed because of alleged inadequate service during a period ten years ago when Montgomery Ward employees were on strike.

The anti-trust suit against Western railroads, known as the "Lincoln case" was dismissed on December 19, 1952, on motion of the United States.

SHAREHOLDERS AND EMPLOYEES

As of November 20, 1952, there were 32,612 owners of Great Northern stock, holdings averaging 93 shares per shareholder.

The average number of employees in service during 1952 was 29,157 compared with 29,907, the average number of employees for 1951.

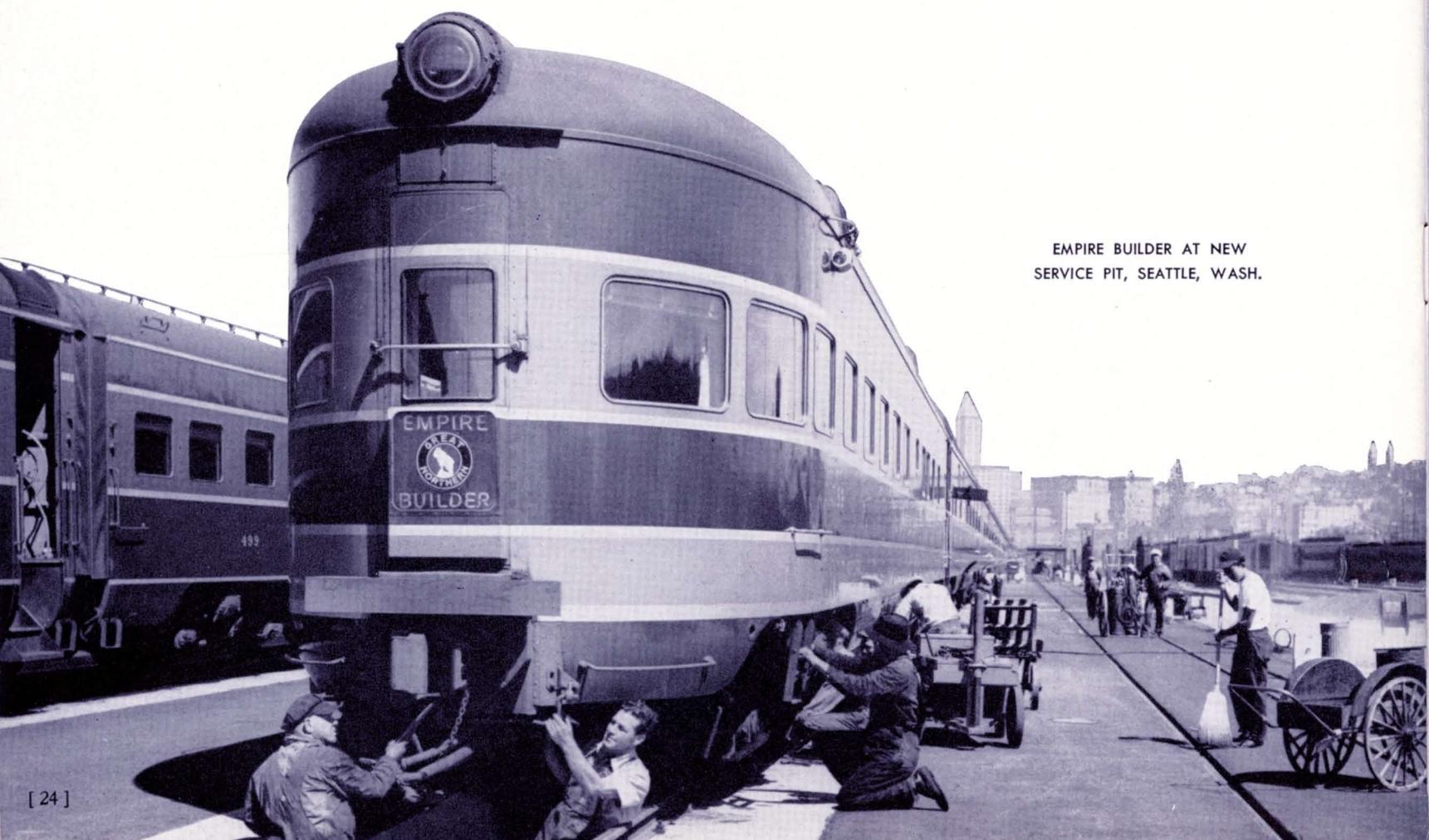
The loyalty and efficiency of the officers and employees during the year have been

outstanding and the management wishes to make sincere acknowledgment of the part played by these people in the successful operation of the Company.

FOR THE FUTURE

Traffic volume for 1953 should be substantial. The lumber traffic is running slightly ahead of 1952 and it is hoped that the carloadings will at least equal those for last year. Petroleum products loadings are higher and will undoubtedly continue so. There is every expectation of a record movement of iron ore. The volume of fresh fruit should be better. Lack of moisture may result in a decrease in the grain crop, the extent of which will be determined by the amount of spring rains, as most of the crop in Great Northern territory has not yet been planted. As the present higher scale of freight rates did not go into effect until May 2 or May 17, 1952, there will be some addition to freight revenues through increased rates in the early part of the year.

The addition of new diesel locomotives to the motive power fleet and the effect of recent capital expenditures for fixed property should improve the operating performance. It is reasonable to expect that Great Northern will have substantial net earnings for 1953 and fully maintain its present strong competitive position.



EMPIRE BUILDER AT NEW
SERVICE PIT, SEATTLE, WASH.



