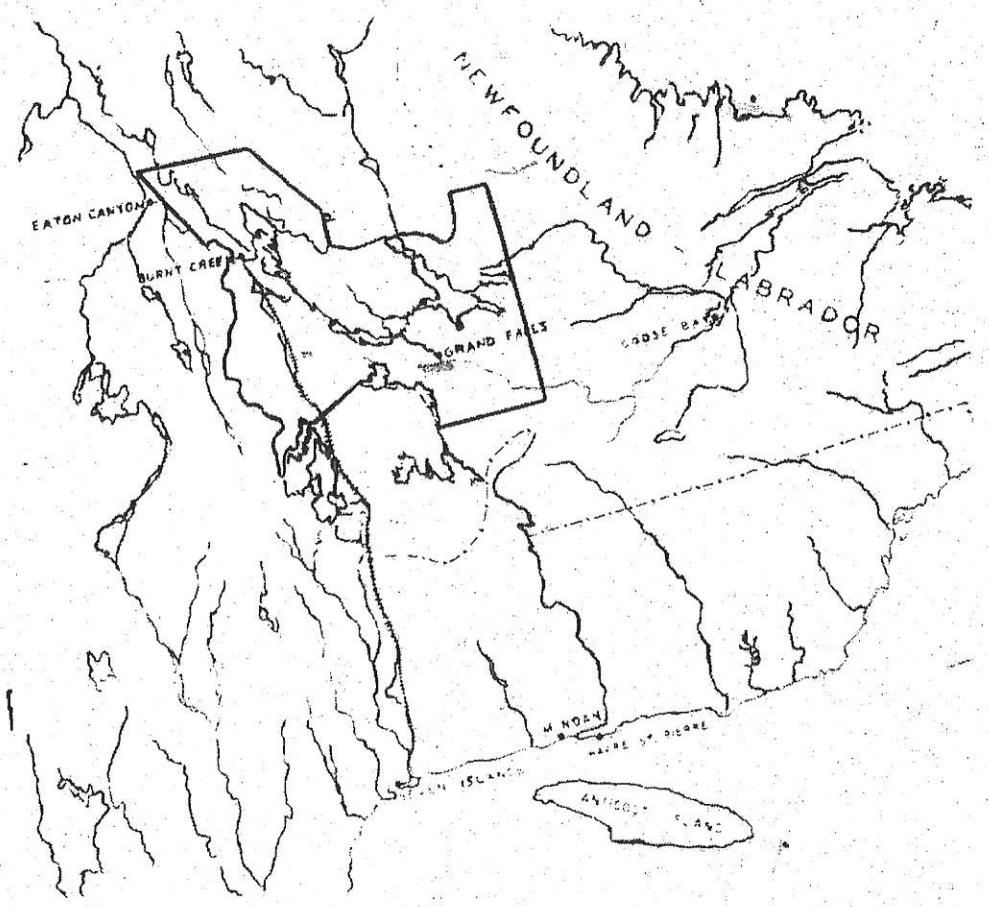
QUEBEC NORTH SHORE AND LABRADOR RAILWAY

Quebec, North Shore and Labrador Railway Co.

Depending upon completion of financing, and upon ability to secure the necessary materials and equipment, a start is to be made during the autumn of this year on construction of the railway northerly from Seven Islands, Que., at the mouth of the St. Lawrence River, for development of the iron ore resources of Labrador Mining and Exploration Co., Ltd., and Hollinger North Shore Exploration Co., Ltd.

THE construction of railway lines in Canada, practically at a standstill for many years, is stirring back to life. With the recent completion of the Canadian National Rys. branch line from Barraute to Kiask Falls, in Northwest Quebec; with construction well begun on a mining railway from Havre St. Pierre (in Saguenay County, Que., on the north shore of the Gulf of St. Lawrence, directly north of Anticosti Island) to develop a large deposit of ilmenite (the ore of titanium); with an extension of the Pacific Great Eastern to Prince George seriously proposed, and with official hopes of beginning construction this fall of the Quebec, North Shore and Labrador Railway, to extend from Seven Islands northerly to the Labrador-Northern Quebec hematite deposits developed by the Hollinger interests, it is evident that railway construction has not departed permanently from the Canadian scene. This, however, is in line with logical expectation. If one will study a map of Canada, and use a reasonable amount of imagination in visualizing the resources which remain to be developed in the northern portions of the country, he can readily decide that the Canadian railway mileage will undoubtedly be added to materially in years to come.

In this article we deal particularly with the plans of the Quebec, North Shore and Labrador Railway Co., which received its charter from the Dominion Government over a year ago, and which has completed reconnaissance (and much of the location) surveys for a



Route of the Proposed Quebec, North Shore and Labrador Ry.

The plans are to build this line, about 360 miles long, to most modern standards, with maximum grades of 0.2% against the current of traffic, and to operate it with Diesel-electric locomotives, with four 1,500 h.p. locomotive units hauling trains with gross tonnage up to 13,000. The line, as seen, is to begin at Seven Islands, on the north shore of the Gulf of St. Lawrence. Note also the location of Havre St. Pierre, from which the line of the Romaine River Ry. Co. is being built to develop a large deposit of ilmenite, as described elsewhere in this issue.

about 1,000,000 cu. yd. of solid rock, equipment are freely available, it is

country, he can readily decide that the Canadian railway mileage will undoubtedly be added to materially in years to come.

In this article we deal particularly with the plans of the Quebec, North Shore and Labrador Railway Co., which received its charter from the Dominion Government over a year ago, and which has completed reconnaissance (and much of the location) surveys for a line to extend generally northerly from Seven Islands for a distance of about 360 miles. As now laid out, the maximum grade southbound (the direction for the loaded trains) is 0.2%. The final location has been completed for about 150 miles northerly from Seven Islands. Over this part of the route, the country is quite rough; the road follows the valleys of the Moisie, Nipissis and Wacouna rivers. The country through which the northerly 200 miles of the line will run is not so rough as the southerly section, and no great constructional difficulties will be encountered.

There is very little timber along the route in the first 150 miles northerly from Seven Islands. At a point about 60 miles north of Seven Islands there will begin a section of line about 10 miles long, with a 2% grade ascending to the north, but, as the northbound trains will consist principally of empties, the use of pushers on this grade will not be necessitated.

Calculations for the first 100 miles out of Seven Islands determined that quantities to be handled would include about 1,000,000 cu. yd. of solid rock, about 1,250,000 cu. yd. of loose rock and about 2,000,000 cu. yd. of common excavation, in addition to which there will be from 6,000 to 7,000 ft. of rock tunnels.

Route of the Proposed Quebec, North Shore and Labrador Ry.

The plans are to build this line, about 360 miles long, to most modern standards, with maximum grades of 0.2% against the current of traffic, and to operate it with Diesel-electric locomotives, with four 1,500 h.p. locomotive units hauling trains with gross tonnage up to 13,000. The line, as seen, is to begin at Seven Islands, on the north shore of the Gulf of St. Lawrence. Note also the location of Havre St. Pierre, from which the line of the Romaine River Ry. Co. is being built to develop a large deposit of ilmenite, as described elsewhere in this issue.

The proposal is to build a railway which will be first class and modern in every respect, with maximum curvature of six degrees and with 130 lb. steel, and it is proposed to operate with Diesel-electric locomotives and 100-ton ore cars. It is figured that four 1,500 h.p. Diesel-electric locomotive units will haul from 10,000 to 13,000 tons per train. The terminal shops will be at Seven Islands. Huge quantities of iron ore of high quality have been put in sight by the work of recent years, and the expectation is that by the time the railway construction is completed and the roadbed consolidated, a production of 10,000,000 tons of iron ore per year will be attained. The management proposes to divide the construction work among quite a large number of contractors, possibly from 10 to 15, and these contractors will be serviced by air in large degree during the construction period. If materials and equipment are freely available, it is hoped to complete the railway construction job in four years after the completion of financing. If financing is successfully carried out, construction will be begun in the autumn of this year.

In addition to the locomotive and car maintenance shops at Seven Islands, there will be required there extensive facilities for unloading the ore from the cars into the holds of ships, and an estimate of the expenditure for the harbour and ore docks at Seven Islands places it at $10,000,000. The outlay on railway construction is expected to be about $55,000,000, and that for motive power and rolling stock about $45,000,000.

At the present time, the company is building a tote road northerly from Seven Islands. Mining operations in the concessions secured from the Newfoundland-Labrador and Quebec governments will be along the same lines as those at the Steep Rock Iron Mines, Ltd., property in northwestern Ontario, in that the mining season will probably be limited to the months in which excessively cold weather is not present.

The mining will be entirely an open pit proposition, at least in the earlier years. In order to extend the shipping season at Seven Islands, a port which is ice-free for about nine months each year, it is planned to stockpile at least two million tons of ore there. During the busy season, the railway would move between 60,000 and 70,000 tons of ore a day. The plan is to handle the ore from the open pits with shovels of at least six cu. yd. capacity. It is proposed to employ belt loading in handling the ore from car to ship at Seven Islands.

Jules R. Timmins is President of Quebec, North Shore and Labrador Railway Co., and W. H. Durrell, a man with much experience in northern construction work, is General Manager. In January, Mr. Durrell addressed the Toronto Board of Trade members and outlined the company's plans for them. He emphasized that the confidence of the company's officers in the Quebec-Labrador iron ore project is unbounded, and stated that the huge ore resources developed promise to make a major contribution to the Canadian economy, by earning large numbers of United States dollars, which have become so necessary to the maintenance of prosperity in Canada. Mr. Durrell made plain that Canada will have first call upon the ore made available, but, with expectation of a maximum Canadian demand of two million tons a year, the company will have to look for a market for the bulk of its ore to the steel mills of Pittsburgh and the United States middle west. Mr. Durrell was apparently fully seized of the fact that there is plenty of competition in the iron ore business; he pointed to the availability of the Lake Superior area, and to high grade ores in Brazil and Venezeula which can be mined during 12 months of the year and delivered in

iron ore business: he pointed to the availability of the Lake Superior area, and to high grade ores in Brazil and Venezeula which can be mined during 12 months of the year and delivered in the United States at competitive prices. However, he indicated, all these factors have been weighed, and the management has no doubt of its ability to compete. He emphasized, however, that to cheapen the cost of transportation, the St. Lawrence navigation and power development scheme will have to be completed. Most of the total expenditure of about $200,000,000 which will be required to bring the entire project to fruition will be spent in Canada, Mr. Durrell emphasized; in fact, about $190,000,000 can be spent in Canada; the locomotives, cars and all construction materials will be of Canadian origin, and about the only important equipment which will have to be imported will be the huge shovels for mining the ore from the open pits.

Unofficial advice is that in the first 100 miles out of Seven Islands the route for the railway attains an elevation of 1,900 ft. above sea level.

It was indicated in the foregoing that the timber resources along the southerly 150 miles of the route of the proposed railway are quite limited. Enquiry elicits official advice that the management expects to obtain in the vicinity of Seven Islands probably 25% of the ties required for the railway; the balance of the ties required will have to be shipped in to Seven Islands.

Work Begins on Labrador Ry.

About 500 men were busy on preliminary work in connection with the construction of the Quebec, North Shore and Labrador Ry., early in January, laying out the yards at Seven Islands, building camps and air strips along the railway right of way and distributing equipment.

The work of construction of the Quebec, North Shore and Labrador Ry., the line being built by Iron Ore Co. of Canada to connect the iron ore fields of Labrador and Northern Quebec with Seven Islands, on the Gulf of St. Lawrence, has begun, and early in January some 500 men had been taken on and were laying track in the terminal area at Seven Islands, building camps along the first 100 miles of the projected railway route, preparing airfields, and generally getting ready for the beginning of actual main line railway construction in the spring, when it is anticipated that some 2,500 men will be employed, together with about 500 more who will be engaged on the construction of permanent docks at Seven Islands.

A great deal of information in regard to the Quebec, North Shore and Labrador Ry. project, based on advice from the management, is given in the following.

Line To Be 358 Miles Long

The mileage of the projected railway, from the southern terminus at Seven Islands to the northern terminus at Knob Lake, New Quebec, will be 358. The railway will be a single track one, and there will be between 20 and 25 sidings, each one mile long. The main line track will be laid with 132 lb. steel, while 100 lb. steel will be employed in sidings and yard tracks.

Ties.—About half of the ties required for construction are to be obtained locally, and these will be mainly of white and black spruce. The other half of the ties will be delivered by ship to Seven Islands and distributed from there. Creosoted ties have been purchased, these being mainly hard woods, viz., beech, birch and maple, with a small percentage one tunnel will be required in construction of the line, this tunnel, 2,200 ft. long, will be driven just south of the Moisie River Bridge, and a contract for this work has been awarded Patrick Harrison as a sub-contract from the contracting group.

Earthwork and Rock Excavation.—Earthwork involved in the construction of the line will total 6.8 million cu. yd., in addition to which there will be the excavation of 2.5 million cu. yd. of solid rock and the same quantity of loose rock.

Curvature.—The line is to be built with maximum curvature of 8 degrees, and all curves of minimum radius will be in the heavy country south of mile 97.

Gradients and Elevations.—The maximum grade southbound, the direction in which the loaded ore trains will move, will be 0.3%, compensated for curvature. Northbound the maximum grade will be 1.8%, compensated for curvature, and this grade will extend for a distance of eight miles, beginning at mile 67. From water level at Seven Islands there will be a long climb to mile 94, the line ascending to an elevation of 1,885 ft. at that mileage. North of mile 94, the line passes through rolling country, with light grades. The summit, with elevation of 2,050 ft., is reached at mile 194, and the elevation at the northern terminus at Knob Lake is 1,670 ft.

Motive Power and Rolling Stock.—The plans call for the acquisition of 53 Diesel-electric locomotives, probably 1,600 h.p. units, together with 2,000 solid bottom ore cars of 100 tons capacity. It is intended to operate the line with trains comprised of 100 cars hauled by four locomotive units.

at Knob Lake, New Quebec, will be 358. The railway will be a single track one, and there will be between 20 and 25 sidings, each one mile long. The main line track will be laid with 132 lb. steel, while 100 lb. steel will be employed in sidings and yard tracks.

Ties.—About half of the ties required for construction are to be obtained locally, and these will be mainly of white and black spruce. The other half of the ties will be delivered by ship to Seven Islands and distributed from there. Creosoted ties have been purchased, these being mainly hard woods, viz., beech, birch and maple, with a small percentage of red pine. The ties to be obtained locally will be given preservative treatment also, in the field.

Many Bridges.—The line will require 25 steel bridges, varying from 40 ft. to 705 ft. in length; six of them will be 200 ft. or more in length. The largest steel bridge will be that over the Moisie River, at mile 14 from Seven Islands, and this bridge will carry the track about 150 ft. above the river water level. This bridge will be a continuous deck structure of three main spans, two of 247 ft. 6 in. each, and the third of 202 ft., in addition to which there will be three 40 ft. deck plate girder spans at the north end. The three main bents are on abutments.

One River Crossing on Power Dam.—The crossing of the Ashuanipi River, about 35 miles south of Knob Lake, will utilize the power dam structure which is being built; the rails will be laid on the crest of the fill and concrete composing the dam.

One Tunnel.—The boring of only

there will be a [illegible] 94, the line ascending to an elevation of 1,885 ft. at that mileage. North of mile 94, the line passes through rolling country, with light grades. The summit, with elevation of 2,050 ft., is reached at mile 194, and the elevation at the northern terminus at Knob Lake is 1,670 ft.

Motive Power and Rolling Stock.—The plans call for the acquisition of 53 Diesel-electric locomotives, probably 1,600 h.p. units, together with 2,000 solid bottom ore cars of 100 tons capacity. It is intended to operate the line with trains comprised of 100 cars hauled by four locomotive units.

Repair Shops.—Locomotive and car repair shops are to be located at Seven Islands, where the railway general offices will be established also.

Receiving and classification yards, as well as storage facilities, will be provided at Seven Islands.

Seven Islands Terminal Facilities

In handling the southbound iron ore, the lading from the ore cars will be discharged in a tandem dumper capable of handling two cars at a time. The ore will be delivered to two mechanical feeders on to two reversible belt conveyors, each with capacity of 3,200 tons per hour. Operating in one direction, these conveyors will deliver the ore to a single conveyor which will handle it to a 1,200 ton surge bin on the dock, from which it will flow by gravity to mechanical feeders delivering to two dock conveyors, each with capacity of 4,000 tons per hour. Ships will be loaded at the rate of from 6,000 to 8,000 tons per hour through travelling boom loaders.

When the reversible belt conveyors under the car dumper run in the opposite direction, they will deliver to a stacker conveyor through intermediary conveyors for discharging into the storage areas. Ore will be recovered from storage by electric shovel delivering to cars. The ore handling dock, with steel sheet piling face and concrete deck, is to be about 2,000 ft. long.

Contractors Operating As Unit.—In a preceding issue it was noted that contracts for construction of the railway had been awarded Cartier Construction Co., Montreal, MacNamara Construction Co., Ltd., Toronto, Fred Mannix Co., Ltd., Calgary, and Morrison-Knudsen Co. of Canada. Recent official advice is that the project is being handled by the group of contractors as a unit, the work not being divided.

Moisie River Bridge Contract.—However, the contract for the bridge over the Moisie River is not included in the general contract, a separate contract for this structure having been awarded the Dominion Bridge Co., Ltd., by the railway company.

Air Transport Utilized.—During construction, light equipment, personnel and perishable goods will be transported by air to various camps along the railway route. One airstrip has been completed, at a point about 80 miles from Seven Islands.

Capacity.—In 1955, expected to be the first year of operation of the railway and terminal facilities, it is expected that five million tons of ore will be shipped, with this quantity increasing to 10 million tons in 1956. The rail deliveries at this latter tonnage will be in the order of 70,000 tons daily throughout an ore-shipping season of from 150 to 160 days.

32 persons killed and 337 injured, and 58 accidents at level crossings, with 17 persons killed and 83 injured, a total of 282 accidents, with 49 persons killed and 420 injured.

The level crossing accidents, by provinces, were:—

Prince Edward Island	1
Nova Scotia	5
Quebec	8
Ontario	25
Manitoba	7
Saskatchewan	3
Alberta	6
British Columbia	3
	58

Automobiles were involved in 42 accidents, trucks in 15 and a pedestrian in one. Chief causes were driving into side of trains and driving onto crossings in front of approaching trains. Fifty-one accidents occurred at unprotected crossings and seven at protected crossings, and 22 occurred after sunrise and 36 after sunset.

Diesel School in P.E.I.

What is said to be the first railway

Birthdays of Transportation Men

Quebec North Shore and Labrador Ry.

In connection with construction of the Quebec, North Shore and Labrador Ry., Iron Ore Co. of Canada subsidiary enterprise, for which, as noted previously, contracts were awarded Cartier Construction Co., Montreal, MacNamara Construction Co., Ltd., Toronto, Fred Mannix Co., Ltd., of Calgary, and Morrison-Knudsen Co. of Canada, preliminary work is under way. At Sept Isles (Seven Islands), St. Lawrence River port about 360 miles northeast of Quebec and southern terminus of the projected railway, temporary docking facilities are being built for the unloading of heavy equipment, and the company sawmill is turning out timber required for construction purposes. The expectation is that, this winter, equipment will be distributed along the southerly hundred miles of the route, and that considerable rock work (tunneling, as well as taking out of rock cuts) will be completed. Airfields will be prepared at a number of points along the route, for servicing of camps, and earthwork will be begun in the spring.

Financing.—The parent company, Iron Ore Co. of Canada, is reported [illegible] issued $100 mi[illegible] 3¾%

Steel Corp.; Hanna Coal and Ore Corp.; Hollinger Consolidated Gold Mines, Ltd.; Hollinger North Shore Exploration Co., Ltd.; Labrador Mining and Exploration Co., Ltd.; National Steel Corp.; Republic Steel Corp.; Youngstown Sheet and Tube Co., and Wheeling Steel Corp. The parent company is stated to have retained the engineering firms of Stone and Webster, Coverdale and Colpitts, Sanderson and Porter and the Canadian firms of C. D. Howe Co., Ltd., and Montreal Engineering Co., Ltd., in connection with various aspects of the project.

As stated in a preceding issue, the intention is to operate the 360-mile railway with Diesel-electric locomotives.

Over 400 million tons of high grade iron ore has already been blocked out.

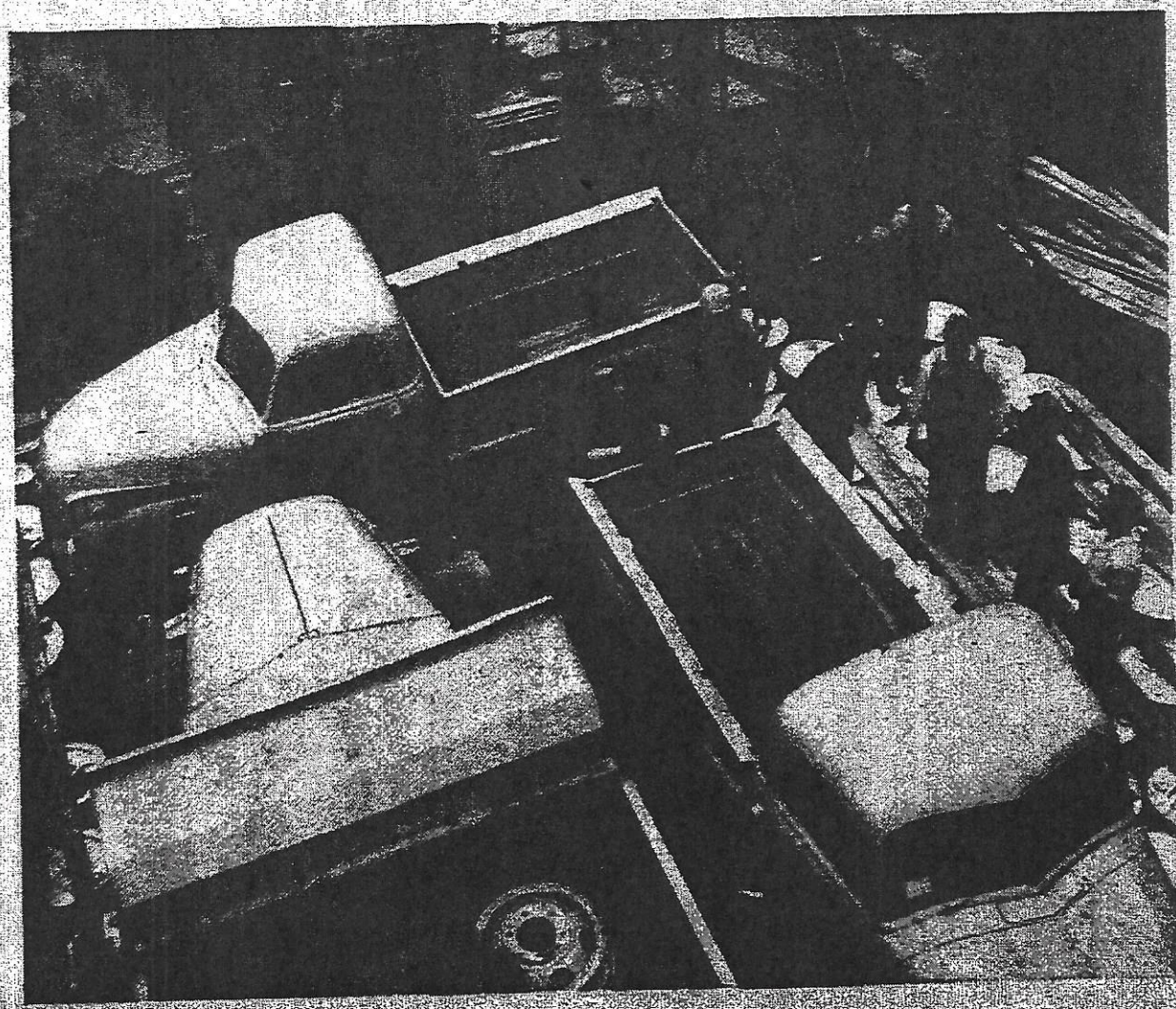
Complete financing of the Labrador iron ore project is estimated to require between $125 million and $150 million; the railway is expected to cost about $50 million; rolling stock and other equipment between $40 and $50 million; hydro-electric power projects, about $7 million; mining equipment and buildings, about $18 million, and

siderable rock work (tunneling, as well as taking out of rock cuts) will be completed. Airfields will be prepared at a number of points along the route, for servicing of camps, and earthwork will be begun in the spring.

Financing. — The parent company, Iron Ore Co. of Canada, is reported as having issued $100 million 3¾% first mortgage bonds, due in 1977, which are being subscribed for by four Canadian and 15 United States insurance companies. The capital structure is said to authorize $125 million in these first mortgage bonds, $40 million in income debentures and $60 million in common stock. The junior securities, it is stated, are being taken by the Iron Ore Co. of Canada stockholders, which are:—Armco

Complete financing of the Labrador iron ore project is estimated to require between $125 million and $150 million; the railway is expected to cost about $50 million; rolling stock and other equipment between $40 and $50 million; hydro-electric power projects, about $7 million; mining equipment and buildings, about $18 million, and terminal facilities at Seven Islands between $10 million and $15 million.

The board of directors of the Iron Ore Company of Canada is reported as consisting of George M. Humphrey, President of The M. A. Hanna Co.; Jules R. Timmins, President of Hollinger Consolidated Gold Mines Ltd.; C. M. White, President, and W. W. Hancock, Secretary of Republic Steel Corp.; W. W. Holloway, Chairman, and



G.M.C. Trucks for Labrador Railway Construction Work Being Loaded aboard Ship at Montreal on Their Way to Seven Islands

was also presented with a [illegible] fitted luggage for Mrs. Thompson.

Labrador Iron Ore Railway

Reference to the awarding of contracts for the 360-mile railway line to run north from Seven Islands, on the north shore of the Gulf of St. Lawrence, to the iron ore fields on the Labrador-Quebec border, appeared in our October issue, pg. 550. On October 18, Dr. J. A. Retty, Chief Geologist for the Labrador Mining and Exploration Co., Ltd., addressed the Canadian Institute of Mining and Metallurgy, and indicated that actual construction work on the railway would start in the then near future. He is reported as having stated that the group behind the venture has already spent $10 million, and that the ore reserves to be tapped already stand at about 400 million tons. Work on building a dock at Seven Islands is proceeding. Listing the financial interests behind the venture, Dr. Retty mentioned the Iron Ore Co. of Canada, Hollinger Consolidated Gold Mines, Ltd., Hollinger-North Shore Exploration Co., Labrador Mining and Exploration Co., Republic Steel Corp., Hanna Coal and Ore Co., Youngstown Sheet and Tube Co., Wheeling Steel Corp., Armco Steel Corp. and National Steel Co.

New Type Freight Car

Good Progress on Labrador Ry.

Construction of the 358-mile railway to connect Seven Islands, Que., with the iron ore fields in Northern Quebec and Labrador, has been progressing in satisfactory manner, with considerable steel laid and with grading done on about 90 miles of line from the southern end and on about 30 miles from the northern end. About 3,300 men are employed. Work is progressing well on the terminals at Seven Islands also.

Precise information in regard to the Quebec, North Shore and Labrador Ry., being built by Iron Ore Co. of Canada to connect the port of Seven Islands, on the north shore of the Gulf of St. Lawrence, with the iron ore areas in northern Quebec and Labrador, was presented in our February issue, pg. 75, where it was recorded that the railway line from Seven Islands to Knob Lake, the northern terminus, will be 358 miles long; that the railway is to be a single track one, with between 20 to 25 sidings, each one mile long; that the main line track will be laid with 132 lb. steel, with 100 lb. steel in sidings and yard tracks; that the line will require 25 steel bridges, varying from 40 ft. to 705 ft. in length, with the largest, that over the Moisie River, about 14 miles north of Seven Islands, and that one tunnel would be required, this boring to be 2,200 ft. long, just south of the Moisie River bridge. A contract for this tunnel was awarded Patrick Harrison as a sub-contract from the contracting group, and the work has been completed.

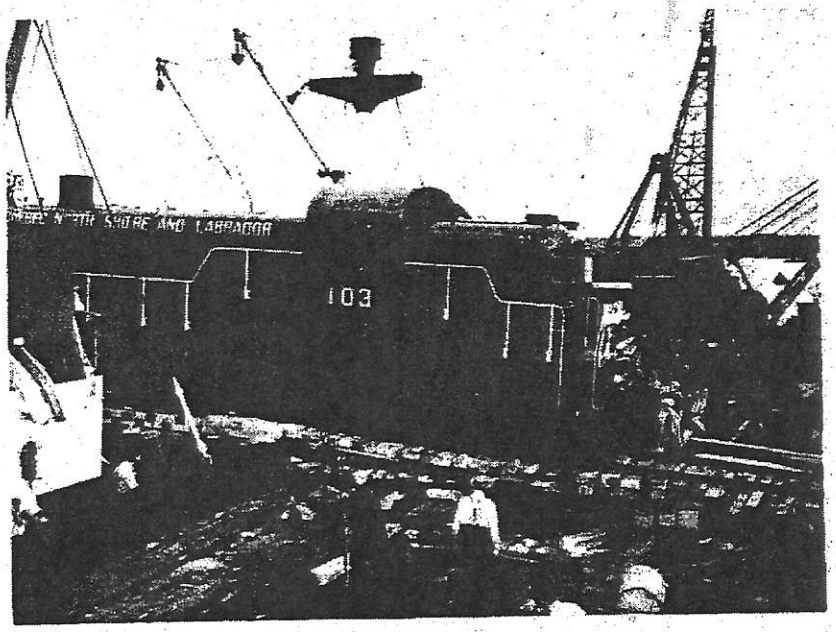
The contracting group is composed of Cartier Construction Co., Montreal; MacNamara Construction Co., Ltd., Toronto; Fred Mannix, Co., Ltd., Calgary, and Morrison-Knudsen Co. of Canada.

In preparation for construction, a tote road and a series of airfields were constructed, and construction work has been going ahead energetically during the spring and summer, with grading carried on from both the southern and northern ends. To date, grading is well advanced on the first 90 miles north from Seven Islands and the first 30 miles south from Knob Lake. Throughout the winter and spring, several large planes, including a "flying box car", were engaged in moving in supplies and equipment, including power shovels, tractors, trucks and graders, and a large supply of fuel oil. Over 10 million lb. of freight has been flown in to date, much of it to Knob Lake. The Moisie River bridge is about completed at time of writing, and limited track-laying north of it before season's end is considered possible. Next spring, after the requirements of a mining operation producing 10 million tons of ore a year, and accompanying community requirements. The power house is being built with sufficient capacity to allow of installation of a second 10,000 h.p. unit. The power site is said to have potential capacity of 40,000 h.p. The electrical equipment for the unit is to be delivered next year; it will go forward by rail to the then end of steel, and the remainder of the distance by winter road.

At Seven Islands, construction of the permanent wharves has been begun, and good progress has been made on yard grading and track laying. The manner in which the ore will be handled at the terminal was described in our February issue article; ore will be transferred to ships, or to storage areas, by mechanical feeders and belt conveyors, and recovery of ore from [illegible] electric shovel

Lakes, but the Iron Ore Co. of Canada has plans to move large quantities of ore whether the seaway is constructed or not. It is reported that contracts for the construction of two ore ships have been awarded a United Kingdom builder; these will have capacity of 30,000 tons each, and will be too wide to pass through the Welland Ship Canal; they will operate between Seven Islands and the U.S. Atlantic seaboard. To prepare for handling the ore, the Baltimore and Ohio Rd. is building an ore pier at Baltimore at expenditure of $5 million, and the Pennsylvania Rd. is reported as spending up to $20 million on improvement of its present piers at Philadelphia. The Iron Ore Co. of Canada, Ltd., President, is reported as saying that when the ore movement gets under way, 10 million tons a year will move to market, whether or not the St. Lawrence seaway is provided. If the seaway is built, a much larger tonnage could be expected to be handled.

In describing the plans for the operation of the railway line, in our February issue article, it was noted that the intention was to purchase 53 Diesel-electric locomotives, probably 1,600 h.p. units, together with 2,000 solid bottom ore cars of 100 tons capacity, the intention being to operate with 100-car trains hauled by four



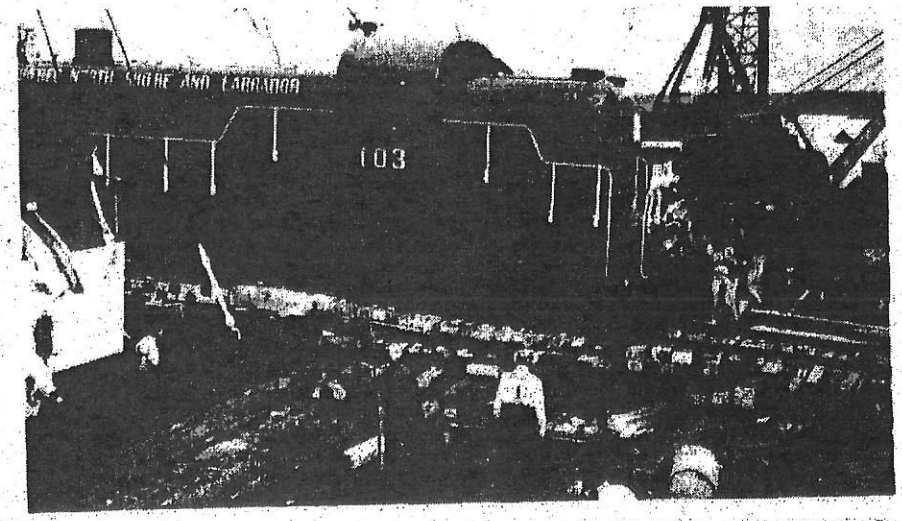
The Unloading of an MLW Diesel-electric Road Switcher for the Q.N.S. and L. at Seven Is. The unloading of this locomotive and its companion unit from the ship was a ticklish job; rails had to be laid on timbers right up to the ship's deck, and the locomotives started for shore under their own power.

the railway is to be a single track one, with between 20 to 25 sidings, each one mile long; that the main line track will be laid with 132 lb. steel, with 100 lb. steel in sidings and yard tracks; that the line will require 25 steel bridges, varying from 40 ft. to 705 ft. in length, with the largest, that over the Moisie River, about 14 miles north of Seven Islands, and that one tunnel would be required, this boring to be 2,200 ft. long, just south of the Moisie River bridge. A contract for this tunnel was awarded Patrick Harrison as a sub-contract from the contracting group, and the work has been completed.

The contracting group is composed of Cartier Construction Co., Montreal; MacNamara Construction Co., Ltd., Toronto; Fred Mannix, Co., Ltd., Calgary, and Morrison-Knudsen Co. of Canada.

In preparation for construction, a tote road and a series of airfields were constructed, and construction work has been going ahead energetically during the spring and summer, with grading carried on from both the southern and northern ends. To date, grading is well advanced on the first 90 miles north from Seven Islands and the first 30 miles south from Knob Lake. Throughout the winter and spring, several large planes, including a "flying box car", were engaged in moving in supplies and equipment, including power shovels, tractors, trucks and graders, and a large supply of fuel oil. Over 10 million lb. of freight has been flown in to date, much of it to Knob Lake. The Moisie River bridge is about completed at time of writing, and limited track-laying north of it before season's end is considered possible. Next spring, track laying will proceed rapidly, and it is hoped to have the track laid for 150 miles north from Seven Islands by the end of the 1952 construction season.

In addition to work on the Seven Islands terminals and the railway, work has been proceeding on a power plant at Menihek Rapids, to supply power for mining operations. This plant is to have initial capacity of 10,000 h.p., which is considered sufficient to look



The Unloading of an MLW Diesel-electric Road Switcher for the Q.N.S. and L. at Seven Is. The unloading of this locomotive and its companion unit from the ship was a ticklish job; rails had to be laid on timbers right up to the ship's deck, and the locomotives started for shore under their own power.

capacity to allow of installation of a second 10,000 h.p. unit. The power site is said to have potential capacity of 40,000 h.p. The electrical equipment for the unit is to be delivered next year; it will go forward by rail to the then end of steel, and the remainder of the distance by winter road.

At Seven Islands, construction of the permanent wharves has been begun, and good progress has been made on yard grading and track laying. The manner in which the ore will be handled at the terminal was described in our February issue article; ore will be transferred to ships, or to storage areas, by mechanical feeders and belt conveyors, and recovery of ore from storage will be by electric shovel, delivering to cars. The ore handling dock with steel sheet piling face and concrete deck, is to be about 2,000 ft. long

As concerns transportation of the ore after it is loaded aboard ship at Seven Islands, there is general agreement that construction of the projected St. Lawrence seaway would greatly facilitate delivery to inland steel mills in the United States south of the Great

spending up to $20 million on improvement of its present piers at Philadelphia. The Iron Ore Co. of Canada, Ltd., President, is reported as saying that when the ore movement gets under way, 10 million tons a year will move to market, whether or not the St. Lawrence seaway is provided. If the seaway is built, a much larger tonnage could be expected to be handled.

In describing the plans for the operation of the railway line, in our February issue article, it was noted that the intention was to purchase 53 Diesel-electric locomotives, probably 1,600 h.p. units, together with 2,000 solid bottom ore cars of 100 tons capacity, the intention being to operate with 100-car trains hauled by four locomotive units. The company has already acquired four Diesel-electric locomotives, two from Montreal Locomotive Works, Ltd., and two from General Motors Diesel, Ltd., and an order had been placed with National Steel Car Corp., Ltd., for 20 Magor type air dump cars of 30 cu. yd., 50-ton capacity. The locomotives have been delivered to Seven Islands. Recent official advice is that negotia-

tions covering additional equipment are proceeding.

It was estimated that the total cost of building the railway, providing the terminals, developing hydro-electric power and installing complete mining facilities would be about $200 million, with the railway and its equipment costing $100 million, the terminal facilities $15 million and the power and mining plants and sundry items making up the balance. Since the plans were originally completed they were amended to provide for sufficient speeding up in construction to permit of mining and shipping a year earlier than originally contemplated, and this has resulted in some increase in expense, but not a great one. It is said that construction costs to date are well within estimates, and that no further ouside financing will be necessary. The first rail shipments of iron ore are expected to be made in 1954, but they will not be large.

Total earthwork involved in construction of the railway will be about 6.8 million cu. yd., and solid rock and loose rock excavation will each total about 2.5 million cu. yd. The maximum grade southbound, for the loaded ore trains, will be 0.3%, compensated for curvature, and maximum grade northbound will be 1.8%. The summit (2,050 ft.) is 194 miles north of Seven Islands. Elevation at Knob Lake is 1,670 ft.

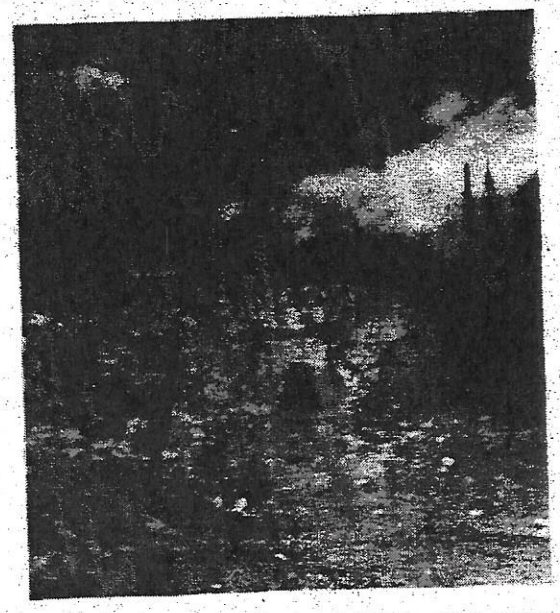
Q.N.S. and L. Progress

In a recent address before the Toronto Railway Club, W. H. Durrell, General Manager, Quebec, North Shore and Labrador Ry., which is now engaged in construction of a railway line northward from Seven Islands, Que., to the iron ore fields in Northern Quebec and Labrador, reviewed construction progress to date and outlined the company's plans as to acquisition of equipment, operations, etc. He said in part:—"The railway is 360 miles in length (the same distance as from Oakville to Montreal). For operating purposes it will be comprised of two subdivisions of 180 miles each. Train movements will be by signal indication, commonly known as C.T.C., supplemented by end to end

South Portal of Tunnel, Mile 11.5 from Seven Islands

radio communications. Passing sidings will have powered remote controlled switches at the south end and spring switches at the north end. It is proposed to keep the loaded trains on the main track at meeting points. Motive power and cabooses will operate through between Seven Islands and the mine (Knob Lake). Crews, both train and enginemen, will change off at Midway, the intermediate terminal, where suitable bunk house and feeding accommodation will be provided. Loaded trains will consist of 115 cars, 14,000 trailing tons hauled by locomotives of 6,000 h.p. Tentative running times are 14 hours for loaded trains and 12 hours for empty trains. To handle the tonnage output of 10,000,000 tons in the operating season, six months will be required to operate approximately seven trains in each direction per day. The operation

signal indication, commonly known as C.T.C., supplemented by end to end



South Portal of Tunnel, Mile 11.5 from Seven Islands

radio communications. Passing sidings will have powered remote controlled switches at the south end and spring switches at the north end. It is proposed to keep the loaded trains on the main track at meeting points. Motive power and cabooses will operate through between Seven Islands and the mine (Knob Lake). Crews, both train and enginemen, will change off at Midway, the intermediate terminal, where suitable bunk house and feeding accommodation will be provided. Loaded trains will consist of 115 cars, 14,000 trailing tons hauled by locomotives of 6,000 h.p. Tentative running times are 14 hours for loaded trains and 12 hours for empty trains. To handle the tonnage output of 10,000,000 tons in the operating season, six months will be required to operate approximately seven trains in each direction per day. The operation will require 55 Diesel units, 20 cabooses, 2,400 ore cars, and for construction and future maintenance, in addition to the above, we require 175 ballast cars, 50 boarding cars, 20 air dump cars, 100 flat cars, 15 tank cars and 20 box cars. We are also providing two 250-ton wrecking cranes with the accompanying wrecking equipment."

We hope to publish Mr. Durrell's address in full in an early future issue.

Wardrope
sioner A.
Macpher
expressin
majority
Commiss
on the
dated Ja
ways to
filed as
increasin
as tariff
gave eff
crease w
Board's
the new
4½%. H
ized ar
until A
sooner
ed by
76,886
tant exc
78,164;
increase
rates or
bulk in
10c a to
and sto
top ca
carload
increas
mum i
lb.; car
creased

Lookin
Adjac

Canadian Transportation

Quebec, North Shore and Labrador Railway

By W. H. Durrell, General Manager, Q.N.S. and L. Ry.

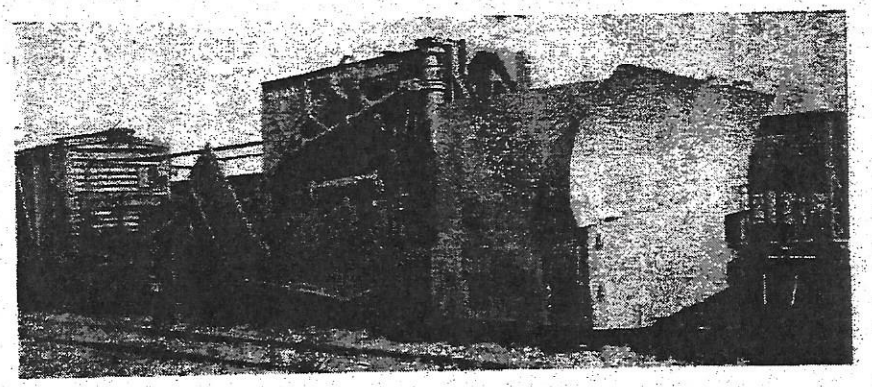
(Editor's Note.—An address by Mr. Durrell on Quebec, North Shore and Labrador Ry. construction progress was given before the Toronto Railway Club, November 26 last, as recorded in our February issue. In it, he brought up to date an account of the work done on the project, and outlined the work remaining to be done, the equipment to be secured, the proposed method of operating the road, and the company's plans as concerns iron ore production. This new railway, as readers are no doubt aware, promises to be an extremely important factor in increasing Canada's iron ore potential, and it will also be a factor of no mean importance in the provision of the raw material for the gigantic steel industry of the United States. Mr. Durrell's description of the plans for operation indicate that the ore tonnage will be moved with maximum efficiency and economy.)

In addressing the Club, Mr. Durrell stated as in the following. The widespread interest occasioned by the discovery of iron ore in New Quebec and Labrador is gradually diminishing. Attention is now focussed mainly on the progress of the 360-mile railway that is being built through these vast, forbidding wastes to transport the ore along the first part of the lengthy haul to consuming centres. On September 23rd, 1950, the contract for construction was awarded to a group of four contractors, consisting of Cartier Construction Company Ltd., McNamara Construction Co. Ltd., Fred Mannix and Company Limited, and Morrison-Knudsen Company of Canada, Ltd. This group, known in condensed form as "CMMK," established headquarters at Seven Islands and constructed camps at miles 12, 28, 40 and 100. At each of these camps, complete living facilities and administrative set-ups are provided for a group of from one hundred to three hundred workmen. Other smaller camps were constructed at 7-mile intervals.

The endless variety of equipment required for construction was moved into these operating points, prior to the spring break-up of 1951, to do a planned amount of right-of-way grading at each camp. Complete facilities were provided to service this equipment, and radio communications were installed at the different camps and at headquarters at Seven Islands for proper supervisory control of operations.

In May, 1951, Iron Ore Company of Canada began construction of the right-of-way at the northern end of the line, working southward from Knob Lake to the site of a combined bridge and power project at Menihek rapids, some thirty miles distant.

At mile 12, a tunnel, 2,250 feet in length, was completed in August, and a bridge, 700 feet long, across the Moisie River is now well under way and will be completed by year's end

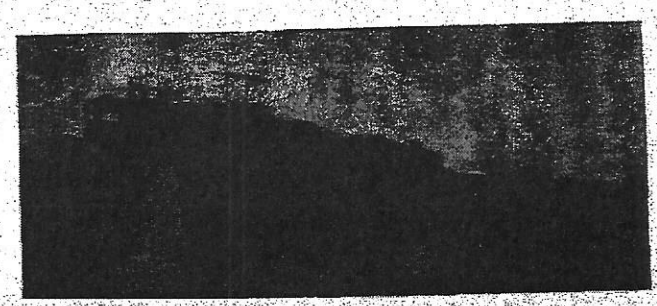


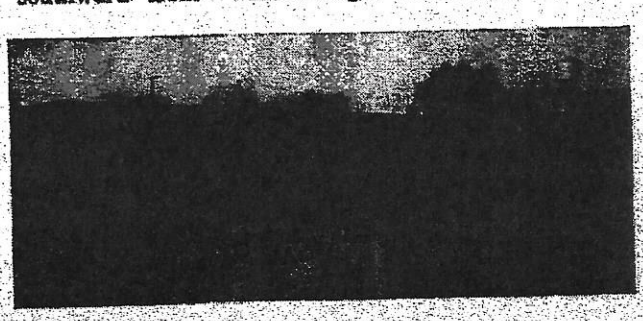
A Jordan Spreader for the Q.N.S. and L.

150 feet above the river.

The railway is of standard construction using 132-lb. main track rail, which is the largest presently used in Canada. It will have treated track ties, 14-inch tie plates, six-hole joint bars, and No. 12 passing track turnouts. The track initially will be ballasted with local suitable gravel, and when the road bed becomes stabilized we propose to rock ballast the main track throughout.

Ore cars will be the solid welded type with a capacity of 95 tons equipped with roller bearings. These will be larger than any ore car pre-

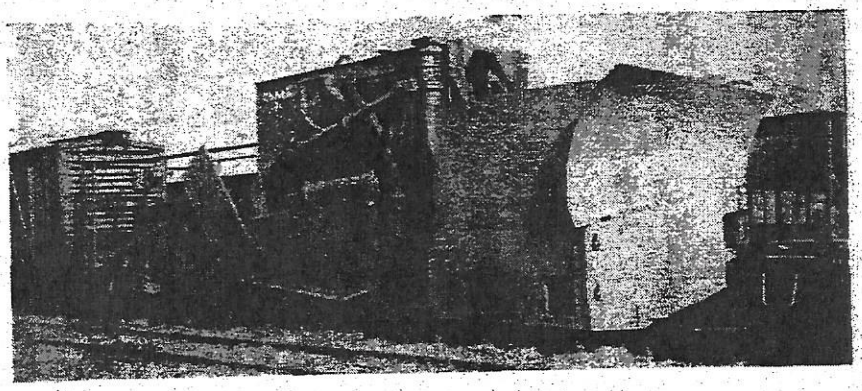




By W. H. Durrell, General Manager, Q.N.S. and L. Ry.

(Editor's Note.—An address by Mr. Durrell on Quebec, North Shore and Labrador Ry. construction progress was given before the Toronto Railway Club, November 26 last, as recorded in our February issue. In it, he brought up to date an account of the work done on the project, and outlined the work remaining to be done, the equipment to be secured, the proposed method of operating the road, and the company's plans as concerns iron ore production. This new railway, as readers are no doubt aware, promises to be an extremely important factor in increasing Canada's iron ore potential, and it will also be a factor of no mean importance in the provision of the raw material for the gigantic steel industry of the United States. Mr. Durrell's description of the plans for operation indicate that the ore tonnage will be moved with maximum efficiency and economy.)

In addressing the Club, Mr. Durrell stated as in the following. The widespread interest occasioned by the discovery of iron ore in New Quebec and Labrador is gradually diminishing. Attention is now focussed mainly on the progress of the 360-mile railway that is being built through these vast, forbidding wastes to transport the ore along the first part of the lengthy haul to consuming centres. On September 23rd, 1950, the contract for construction was awarded to a group of four contractors, consisting of Cartier Construction Company Ltd., McNamara Construction Co. Ltd., Fred Mannix and Company Limited, and Morrison-Knudsen Company of Canada, Ltd. This group, known in condensed form as "CMMK," established headquarters at Seven Islands and constructed camps at miles 12, 28, 40 and 100. At each of these camps, complete living facilities and administrative set-ups are provided for a group of from one hundred to three hundred workmen. Other smaller camps were constructed at 7-mile intervals.



A Jordan Spreader for the Q.N.S. and L.

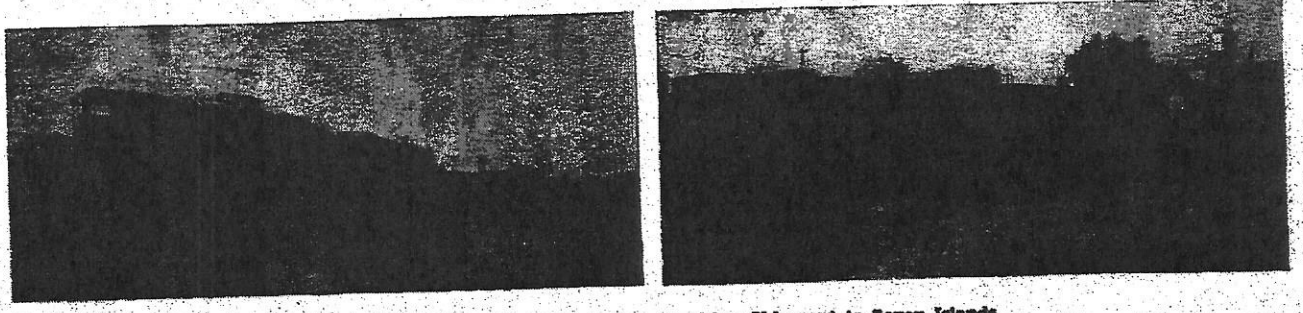
The endless variety of equipment required for construction was moved into these operating points, prior to the spring break-up of 1951, to do a planned amount of right-of-way grading at each camp. Complete facilities were provided to service this equipment, and radio communications were installed at the different camps and at headquarters at Seven Islands for proper supervisory control of operations.

In May, 1951, Iron Ore Company of Canada began construction of the right-of-way at the northern end of the line, working southward from Knob Lake to the site of a combined bridge and power project at Menihek rapids, some thirty miles distant.

At mile 12, a tunnel, 2,250 feet in length, was completed in August, and a bridge, 700 feet long, across the Moisie River is now well under way and will be completed by year's end 150 feet above the river.

The railway is of standard construction using 132-lb. main track rail, which is the largest presently used in Canada. It will have treated track ties, 14-inch tie plates, six-hole joint bars, and No. 12 passing track turnouts. The track initially will be ballasted with local suitable gravel, and when the road bed becomes stabilized we propose to rock ballast the main track throughout.

Ore cars will be the solid welded type with a capacity of 95 tons equipped with roller bearings. These will be larger than any ore car pre-



Rolling Stock for the Q.N.S. and L. Awaiting Shipment to Seven Islands

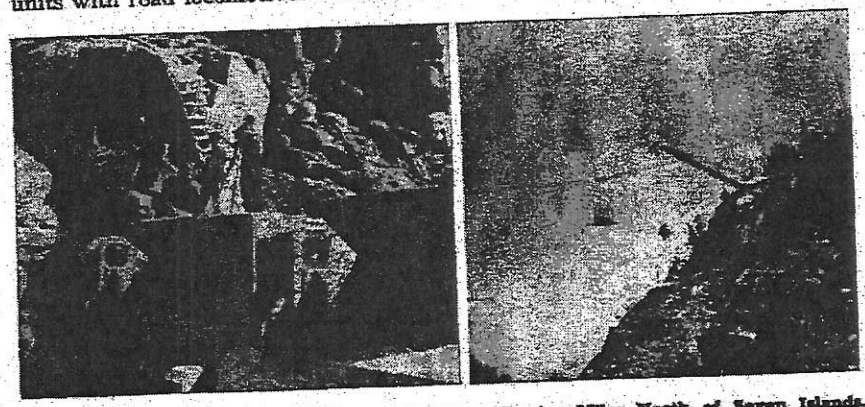
sently in use in Canada, and the railway will be the first to adopt complete roller bearing application to freight car equipment. Instead of the 33-inch wheels generally used, the cars will have 36-inch steel wheels, to produce a better distribution of weight per inch of wheel circumference. They will have empty and load clasp brakes and semi-tight lock couplers. Cabooses will be of all-steel construction equipped with roller bearings.

The motive power will be the Diesel road switcher type. This particular type has been selected inasmuch as they are a satisfactory power unit in both road haul and yard switching operations, enabling us to change out units with road locomotives and units

dump cars, 100 flat cars, 15 tank cars and 20 box cars. We are also providing two 250-ton wrecking cranes with the accompanying wrecking equipment.

The two main terminals will be Knob Lake (the mine) and Seven Islands (the St. Lawrence port). At Knob Lake we will have a common yard for receiving empty trains and despatching loaded trains. Several spurs will extend from this yard to the mine pits. Yard operations will consist of transfer of empty cars to the loading chutes at the pits and return of loads to the main yard, to be made up in trains of approximately 115 cars.

At Seven Islands the yard will consist of a receiving yard, classification



Left, Foundations for Bridge over Moisie River, Twelve Miles North of Seven Islands. Right, a Cable Car Across the Moisie River During Bridge Construction.

in yard work at the mine, thereby centralizing maintenance in the main locomotive and car shops at Seven Islands.

The railway is 360 miles in length (the same distance as from Oakville to Montreal). For operating purposes it will be comprised of two subdivisions of 180 miles each. Train movements will be by signal indication, commonly known as C.T.C. supplemented by end to end radio communications. Passing sidings will have powered remote controlled switches at the south end and spring switches at the north end. It is proposed to keep the loaded trains on the main track at meeting points. Motive power and cabooses will operate through between Seven Islands and the mine (Knob Lake). Crews, both train and enginemen, will change off at Midway, the intermediate terminal, [illegible] house and feed-

yard, departure yard, stock pile yard, car repair yard, locomotive servicing tracks and locomotive shop and car shop, with more than 40 miles of track.

Loaded trains arriving are directed into the receiving yard by signal indication and remote control switches. When the train is part way into the yard, the caboose is detached and runs by gravity towards the departure yard, finally entering upon the caboose tracks which have a slight incline grade, the purpose being so that it can eventually be dropped by gravity to the rear of an empty train for departure, eliminating any switch engine handling of cabooses. As they are pooled, it is immaterial which one is used in each case. After trains arrive in the receiving yard, they are passed over a hump into the classification yard, this classifying being necessary to segregate the different grades of

turn to carry them [illegible] various tracks in the departure yard.

Those branded for repairs are directed to the repair yard. They do not become assembled in out-going trains, the directing of these empty cars being handled by a man in a tower who also operates the car retarders. The automatic [illegible] marker at the inspection pit marks the car so it is plainly visible to the operator in the tower. The entire operation is designed with the view of saving time and man-power. Man-power, with housing, education, recreation, etc., presents a major problem on any new project, particularly in an unsettled, unorganized part of the country.

The entire railway, including terminal facilities, is designed for future expansion based upon handling 20,000,000 tons per season. This would require installation of a second car dumper and some yard additions. The main line would require practically no alteration, as the initial number of passing sidings, namely 22, together with our signal system, gives us a potential capacity of 42 trains per day and practical capacity of 36 trains per day.

Two ore boats of 32,000 tons are now being built in England for transporting the ore.

3,300 men are employed on the project. Approximately 140 miles of the right-of-way has been cleared. The laying of steel has begun along the southern part of the route, and more than 35% of the total grading has been completed. The first hundred-mile stretch is by far the most difficult portion, because it follows canyon-like valleys carved from the rugged mountains by swift and turbulent streams. Many side-hill rock cuts and the movement of considerable earth along the steep-sided valley wall are required along this portion of the route. Northward, beyond this difficult part, the line enters a plateau which will present no obstacle to construction.

Apart from the first twelve mile stretch, the operation is entirely airborne. The air fleet, consisting of twelve radio-equipped aircraft, large and small, and two helicopters, ply between the various operational bases on a round-the-clock schedule. One of the many problems in constructing the railway is to get the proper equipment to the right place at the right time, and in this connection the aircraft have done a colossal job. The air lift operated by a subsidiary, Hol-

Left, Foundations for Bridge over Moisie River, Twelve Miles North of Seven Islands. Right, a Cable Car Across the Moisie River During Bridge Construction.

in yard work at the mine, thereby centralizing maintenance in the main locomotive and car shops at Seven Islands.

The railway is 360 miles in length (the same distance as from Oakville to Montreal). For operating purposes it will be comprised of two subdivisions of 180 miles each. Train movements will be by signal indication, commonly known as C.T.C. supplemented by end to end radio communications. Passing sidings will have powered remote controlled switches at the south end and spring switches at the north end. It is proposed to keep the loaded trains on the main track at meeting points. Motive power and cabooses will operate through between Seven Islands and the mine (Knob Lake). Crews, both train and enginemen, will change off at Midway, the intermediate terminal, where suitable bunk house and feeding accommodations will be provided. Loaded trains will consist of 115 cars, 14,000 trailing tons hauled by locomotives of 6,000 H.P. Tentative running times are 14 hours for loaded trains and 12 hours for empty trains. To handle the tonnage output of 10,000,000 tons in the operating season, six months will be required to operate approximately seven trains in each direction per day. The operation will require 55 Diesel units, 20 cabooses, 2,400 ore cars, and for construction and future maintenance, in addition to the above, we require 175 ballast cars, 50 boarding cars, 20 air yard, departure yard, stock pile yard, car repair yard, locomotive servicing tracks and locomotive shop and car shop, with more than 40 miles of track.

Loaded trains arriving are directed into the receiving yard by signal indication and remote control switches. When the train is part way into the yard, the caboose is detached and runs by gravity towards the departure yard, finally entering upon the caboose tracks which have a slight incline grade, the purpose being so that it can eventually be dropped by gravity to the rear of an empty train for departure, eliminating any switch engine handling of cabooses. As they are pooled, it is immaterial which one is used in each case. After trains arrive in the receiving yard, they are passed over a hump into the classification yard, this classifying being necessary to segregate the different grades of ore. As the cars pass over the hump they are automatically weighed and also inspected from an inspection pit, and the inspector can brand any cars requiring repairs by the simple operation of a hand lever. From the classification yard, cars are moved by between-track side-pusher engines to a car dumper. This dumper is designed to handle two cars at once. It turns the cars over and ore passes through a further crushing process to a conveyor belt which feeds to ship or stock pile. The empty cars leave the dumper by gravity down an incline which gives them sufficient momen-

require installation of a second car dumper and some yard additions. The main line would require practically no alteration, as the initial number of passing sidings, namely 22, together with our signal system, gives us a potential capacity of 42 trains per day and practical capacity of 36 trains per day.

Two ore boats of 32,000 tons are now being built in England for transporting the ore.

3,300 men are employed on the project. Approximately 140 miles of the right-of-way has been cleared. The laying of steel has begun along the southern part of the route, and more than 35% of the total grading has been completed. The first hundred-mile stretch is by far the most difficult portion, because it follows canyon-like valleys carved from the rugged mountains by swift and turbulent streams. Many side-hill rock cuts and the movement of considerable earth along the steep-sided valley wall are required along this portion of the route. Northward, beyond this difficult part, the line enters a plateau which will present no obstacle to construction.

Apart from the first twelve mile stretch, the operation is entirely airborne. The air fleet, consisting of twelve radio-equipped aircraft, large and small, and two helicopters, ply between the various operational bases on a round-the-clock schedule. One of the many problems in constructing the railway is to get the proper equipment to the right place at the right time, and in this connection the aircraft have done a colossal job. The air lift operated by a subsidiary, Hollinger, Ungava Transport, transported during the four summer months of 1951 14,000,000 pounds of equipment and supplies for the project. This is the largest movement of air freight in Canada. During the months of June and July, air transportation was augmented by a Fairchild "Packet" which was made available by the U.S. Air Force and operated by Fairchild Aircraft Corporation. This aircraft alone carried over eight hundred tons of heavy construction equipment to the various air strips along the right-of-way. The great

advantage of the "Packet" is that heavy construction equipment can be driven on and off the aircraft without dismantling. Landing strips have been selected at intervals of approximately thirty miles along the route of the railway. These have been completed at miles 22, 28, 36, 55, 97, 330 (Menihek), and at Knob Lake (mile 360), the northern terminus of the route.

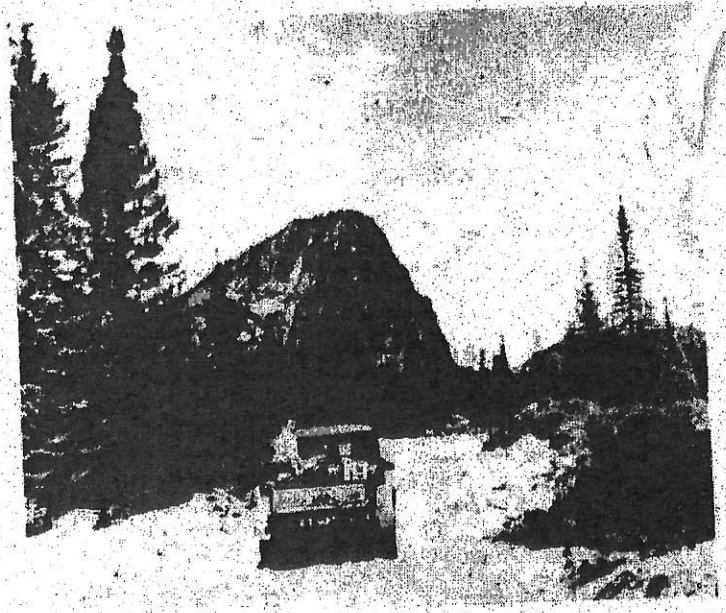
Work during the past season in the vicinity of Burnt Creek (interior operating base ten miles west of Knob Lake) was largely confined to drilling three ore bodies which will be opened for the initial mining operation. This drilling has provided the information necessary for making pit lay-outs, and determining in detail the grade and structure of the ore. Exploratory drilling was conducted on the town site, the location of the marshalling yards and the proposed dump sites, to ensure that no permanent installation will be located over a concealed ore body. Because of the imminent necessity of releasing a large portion of the original concession, geological mapping and prospecting were carried out at an intensified tempo. This ground work was supplemented by an air-borne magnetometer survey of 18,000 line miles, and by aerial photography.

Three new discoveries of iron ore were made as surface outcrops. No exploratory drilling was done within the large earth-covered, potentially favorable tracts between the various deposits. This work can be conducted much more cheaply when the railroad is completed.

During the past season the first family houses were completed at Burnt Creek, and permanent key employees now have their wives and children with them. Machine shop, garage and warehousing facilities were also enlarged.

At Seven Islands, construction on the terminal site has begun and is spread out along three miles. The freight yard is cleared, warehouses have been

of incoming freight. During the past year, the price of real estate has skyrocketed and the population of the town has at least doubled. Formerly there were no hotels, no taverns, no places of amusement, but to-day the town boasts three banks, three hotels, a night club, a yacht club and a theatre. Fishing and hunting are fast becoming incidental pastimes, because of the various new careers that are open to local youth. The site has been



Q.N.S. and L. Tote Road North of Seven Islands

chosen at Seven Islands for the location of company houses, playgrounds and recreation centres. Eventually this town will become a modern, well-planned community.

Iron Ore Company of Canada is constructing a hydro-electric plant at Menehik rapids, thirty miles southwest of Burnt Creek for operations at the mines. Power for the village of Seven Islands and for the ore terminus will be supplied by an installation on the St. Marguerite River twenty miles west of Seven Islands. The site is being developed by Gulf Power Company, financed jointly by Gulf Pulp and Paper Company and Iron

Questions and Answers

Following the presentation of the moving picture, the Chairman, N. A. Walford, General Superintendent, Southern Ontario District, C.N.R., and the 1951 President of the Club, indicated that Mr. Durrell would be pleased to answer any questions in regard to the railway construction work, and the following is a record of the questions which were asked and of the replies which Mr. Durrell gave.

Q.: "Are there any mosquitoes and black flies up in that country?"

A.: "There are plenty of them in the summer. Last summer we tried an experiment—we used a solution of D.D.T. and oil, with spraying equipment and in some sections it worked well, but next year we are going to try another solution to see if we can get a more efficient job."

Q.: "What about the fishing?"

A.; "It is probably better than in any other place in the world that I know of. The lakes are teeming with fish. It is terrific. Near our place we have two choice spots where three or four people can go and be back in an hour or so with a hundred pounds of

work during the past ... vicinity of Burnt Creek (interior operating base ten miles west of Knob Lake) was largely confined to drilling three ore bodies which will be opened for the initial mining operation. This drilling has provided the information necessary for making pit lay-outs, and determining in detail the grade and structure of the ore. Exploratory drilling was conducted on the town site, the location of the marshalling yards and the proposed dump sites, to ensure that no permanent installation will be located over a concealed ore body. Because of the imminent necessity of releasing a large portion of the original concession, geological mapping and prospecting were carried out at an intensified tempo. This ground work was supplemented by an air-borne magnetometer survey of 18,000 line miles, and by aerial photography.

Three new discoveries of iron ore were made as surface outcrops. No exploratory drilling was done within the large earth-covered, potentially favorable tracts between the various deposits. This work can be conducted much more cheaply when the railroad is completed.

During the past season the first family houses were completed at Burnt Creek, and permanent key employees now have their wives and children with them. Machine shop, garage and warehousing facilities were also enlarged.

At Seven Islands, construction on the terminal site has begun and is spread out along three miles. The freight yard is cleared, warehouses have been erected, and in the town proper there is much building activity, with new structures continuing to mushroom along recently opened streets. Work has been started on the government wharf which adjoins the site of the company ore-loading dock.

Boats, with cargoes of construction equipment and supplies are continually arriving at the temporary dock built by Iron Ore Company of Canada at Seven Islands Bay in the fall of 1950. The ore classification yard is now partly filled and some of the steel has been laid in it. The village of Seven Islands has undergone a most amazing transformation. Formerly the abode of hunters, fishermen and lumber jacks, it is fast becoming a progressive mining town, animated by the frenzied activity of boats arriving at the wharf, bustling with people coming and going, noisy with the drone of aircraft landing and taking off from the airport, and with the hum of Diesel locomotives transporting to warehouses assorted cargoes

Q.N.S. and L. Tote Road North of Seven Islands

chosen at Seven Islands for the location of company houses, playgrounds and recreation centres. Eventually this town will become a modern, well-planned community.

Iron Ore Company of Canada is constructing a hydro-electric plant at Menehik rapids, thirty miles southwest of Burnt Creek for operations at the mines. Power for the village of Seven Islands and for the ore terminus will be supplied by an installation on the St. Marguerite River twenty miles west of Seven Islands. The site is being developed by Gulf Power Company, financed jointly by Gulf Pulp and Paper Company and Iron Ore Company of Canada.

Initial iron ore production is planned for 1954. The annual rate will be stepped up gradually to 10,000,000 tons, and it may eventually reach 20,000,000 tons. The start of the construction of the ore-loading docks is planned for the summer of 1952. The progress achieved on the project during the past year is indeed most impressive. Construction on all phases of the operation is on schedule, and unless something unforeseen occurs, the first ore trains will roll towards Seven Islands as planned and the first ore carriers will sail from Seven Islands in 1954.

Moving Picture Shown

(At this point Mr. Durrell showed a moving picture, illustrating constructional activity on the railway; it afforded an excellent idea of the character of the country through which the line is being built, and also of the problems which are being met and solved in the course of the construction work.)

Q.: "Are there any mosquitoes and black flies up in that country?"

A.: "There are plenty of them in the summer. Last summer we tried an experiment—we used a solution of D.D.T. and oil, with spraying equipment and in some sections it worked well, but next year we are going to try another solution to see if we can get a more efficient job."

Q.: "What about the fishing?"

A.: "It is probably better than in any other place in the world that I know of. The lakes are teeming with fish. It is terrific. Near our place we have two choice spots where three or four people can go and be back in an hour or so with a hundred pounds of speckled trout. (Laughter.) And that is no fish story either."

Q.: "How do you propose to handle the freight shipments there—will they have a station at each end?"

A.: "Well, we hope to have some freight to carry—there is timber and all that, but I think that 99 per cent of our freight will be iron ore, which we will be mining and shipping right from the pits to the furnace, and the average grade is 60 per cent iron, and the moisture content is not too high, so when we talk of "ore" up there, we only speak of high-grade, but we do have, however, on the edge of the pits millions of tons of slightly lower grades, so rather than dovetail that and handle it twice, we will probably erect one or two washing plants to bring the grade up to standard, but the reserve which we have referred to is all high-grade ore."

Q.: "How many grades of ore will you take out of the pit altogether?"

A.: "I do not know, but I think

maybe we will have about six grades of ore."

Q.: "Are you having any trouble with labour?"

A.: "Well, we are bound to have a little, but we have had no serious trouble. We have quite a turnover for the ordinary labour, but our regulars have been very good. Our wages are comparable with other enterprises of that kind in Canada and we have gotten on very well. Then we have never had any complaints about the food."

Q.: "Where do you get your labour?"

A.: "We have drawn on the St. Lawrence quite readily, but we have to go outside though—last year we brought in 1500 of the Newfoundlanders, but they do not like to stay away from home more than six weeks or two months."

Q.: "What do you do then?"

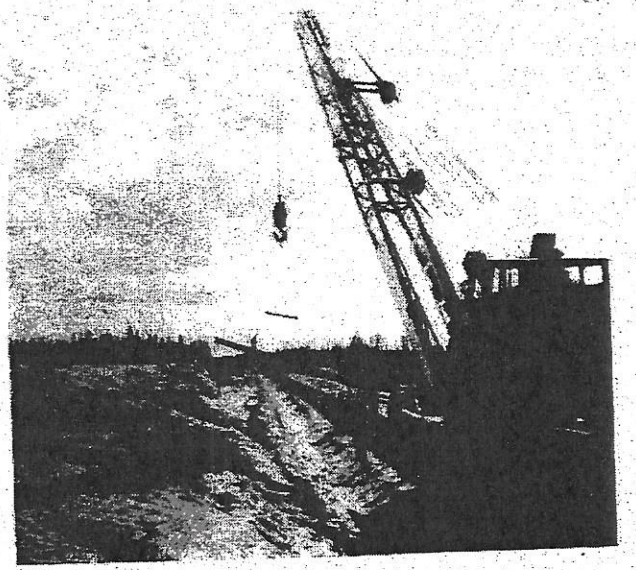
A.: "Well, we bring in some more." (Laughter.)

Q.: "What about your ore prospects?"

A.: "Well, I do not mind mentioning that again. We have at the present time 25,000 square miles which eventually will be cut down to 1,000 square miles, and from 300 to 400 and some million tons in Quebec which we have or can develop, if you put them all together. 95 per cent of that is covered with an over-burn, and there is not much chance of finding or recovering that over-burn, as it is on the surface, so I would say a very conservative guess would be that there would be 100 million tons of ore in sight. Really I think there is an unlimited supply."

Q.: "What is the project likely to cost?"

A.: "We figured in 1949 that $200,000,000 would be needed, but that estimate was based on the fact that we could do it very quickly, but when we get up on the flat we will have around about 32,000 yards per mile, and while we will make more progress in terms of miles we will probably have higher costs per yard moving the material up there, but we are to-day within our estimate—which we consider very good—and we are ahead of schedule. We originally planned on a five-year programme, but we expect to have it completed in the Spring of 1954, and that we will be hauling ore that year, so that will be a year ahead of time. We got a request for speeding up on account of the demand for high grade ore, and as you know the consumption in the United States to-day is something over 100 millions tons a year and the reserves of high grade shipping ore is only a fraction of what it was two years ago. They are down now into the hundreds of millions of tons, so it will only be a matter of a few years until that is exhausted. They are starting to mine a very low-grade material, and it would take millions of dollars to build a plant sufficient to maintain the present demand, so in comparison with the open pit mine we feel that we can really help out. The United States Steel has a very fine deposit, even higher grade than ours, and they plan to bring in eventually from Veriezuela about 15 million tons a year, but they have their problems down there—political problems—and while we have minor ones they have major ones, and from South America the water route is entirely exposed, and during the war the shipping loss was higher than in any other place in the world. We feel that ours is a protected route, and if we did have a war it would be a grand asset to both countries."



Laying Track on Q.N.S. and L. North of Seven Islands

Q.: "How many ore cars have you a few figures to give you, and I am going to repeat them—2,400 cars, and those cars are all roller bearing. Their railway is 362 miles, centrally controlled with end to end radio communication. 14,000 tons per train. In our trains out of Sarnia we think we are pulling a big train at 4,000 tons—and this is 14,000 tons southbound—and they will make that trip in 14 hours. How many months of the year do you plan to operate?"

A.: "We plan on mining for six months. It may be a little more, and possibly a little less, and stock-piling we expect two million tons in the stock pile at the end of 1952."

Q.: "You said your cabooses were pooled?"

A.: "That is right."

THE CHAIRMAN: "We can plainly see that you are in earnest. To me those are staggering figures—no question about it. I do not know whether we all appreciate it—I certainly did not with my bucolic mind."

Q.: "How about accidents?"

A.: "We had two serious accidents caused through mere carelessness. One man was run over by a tractor, and things like that, but we consider that it is quite safe. We have engineers looking after that—but at the same time we have the human element, and someone is going to be killed."

Q.: "What class of locomotives have you?"

A.: "We are just trying equipment in there for the heavy construction, and we will have it in place by the Fall of 1953."

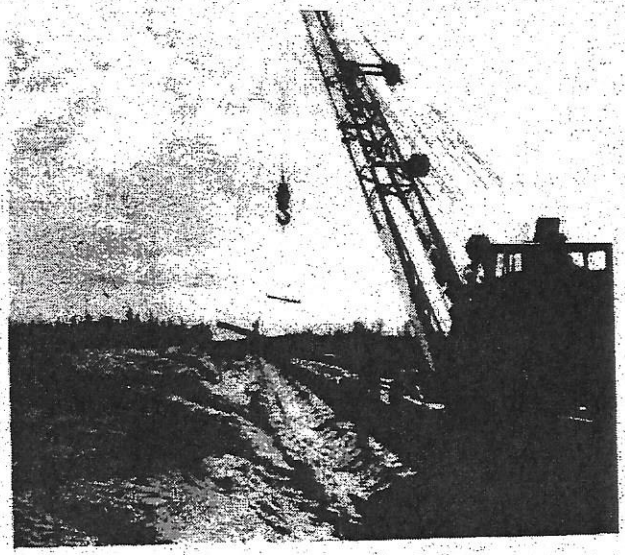
Q.: "What are your plans for permanent living accommodation there for the employees at your terminals, for instance?"

A.: "We are going to have accommodation that is good as anything that you might have anywhere. They will be very comfortable. They are on their way there now—seven or eight hundred people a year ago—and now there are about three thousand. Real estate that was worth $300 a year ago has jumped to $20,000, but after the boom it will settle down."

Q.: "Mr. Durrell, you mentioned mining operations for six months. Is it not the intention to operate for the entire year?"

Q.: "We may have to operate for the entire year, but if it is possible, and it can be worked out, we will close down for the winter. We plan on doing our labour work during the winter, and we can take in all our heavy supplies say in September. I would like to see it closed down for the winter if it would work out, and we will try that, but if it does not work out we will have to keep open although we would have nothing to haul."

Q.: "What about the men who have been working in the summer and then



Laying Track on Q.N.S. and L. North of Seven Islands

to go outside though—last year we brought in 1500 of the Newfoundlanders, but they do not like to stay away from home more than six weeks or two months."

Q.: "What do you do then?"

A.: "Well, we bring in some more." (Laughter.)

Q.: "What about your ore prospects?"

A.: "Well, I do not mind mentioning that again. We have at the present time 25,000 square miles which eventually will be cut down to 1,000 square miles, and from 300 to 400 and some million tons in Quebec which we have or can develop, if you put them all together. 95 per cent of that is covered with an over-burn, and there is not much chance of finding or recovering that over-burn, as it is on the surface, so I would say a very conservative guess would be that there would be 100 million tons of ore in sight. Really I think there is an unlimited supply."

Q.: "What is the project likely to cost?"

A.: "We figured in 1949 that $200,000,000 would be needed, but that estimate was made two years ago."

Q.: "A mile?" (Laughter.)

A.: "No. So far actually this year our costs are better than our estimates, but we are anticipating still higher costs next year. A lot of this year's was heavy cut, where you the United States to-day is something over 100 millions tons a year and the reserves of high grade shipping ore is only a fraction of what it was two years ago. They are down now into the hundreds of millions of tons, so it will only be a matter of a few years until that is exhausted. They are starting to mine a very low-grade material, and it would take millions of dollars to build a plant sufficient to maintain the present demand, so in comparison with the open pit mine we feel that we can really help out. The United States Steel has a very fine deposit, even higher grade than ours, and they plan to bring in eventually from Venezuela about 15 million tons a year, but they have their problems down there—political problems—and while we have minor ones they have major ones, and from South America the water route is entirely exposed, and during the war the shipping loss was higher than in any other place in the world. We feel that ours is a protected route, and if we did have a war it would be a grand asset to both countries."

Q.: "How many ore cars have you now or in sight?"

A.: "We are planning on 2,400 initially, and as production expands we will of course expand that. It is completely roller bearing equipment."

THE CHAIRMAN: "I did note down see that you are in earnest. To me those are staggering figures—no question about it. I do not know whether we all appreciate it—I certainly did not with my bucolic mind."

Q.: "How about accidents?"

A.: "We had two serious accidents caused through mere carelessness. One man was run over by a tractor, and things like that, but we consider that it is quite safe. We have engineers looking after that—but at the same time we have the human element, and someone is going to be killed."

Q.: "What class of locomotives have you?"

A.: "We are just trying equipment in there for the heavy construction, and we will have it in place by the Fall of 1953."

Q.: "What are your plans for permanent living accommodation there for the employees at your terminals, for instance?"

A.: "We are going to have accommodation that is good as anything that you might have anywhere. They will be very comfortable. They are on their way there now—seven or eight hundred people a year ago—and now there are about three thousand. Real estate that was worth $300 a year ago has jumped to $20,000, but after the boom it will settle down."

Q.: "Mr. Durrell, you mentioned mining operations for six months. Is it not the intention to operate for the entire year?"

Q.: "We may have to operate for the entire year, but if it is possible, and it can be worked out, we will close down for the winter. We plan on doing our labour work during the winter, and we can take in all our heavy supplies say in September. I would like to see it closed down for the winter if it would work out, and we will try that, but if it does not work out we will have to keep open although we would have nothing to haul."

Q.: "What about the men who have been working in the summer and then with nothing to do during the winter?"

A.: "We will have to carry them. That is our intention and it is part of our cost, and with the heavy tonnage that we will be hauling we will

have to absorb that. We cannot expect to take men down there for six months in the Summer and then turn them off when Fall comes. We will have to carry on that type of help."

Q.: "That is even better than the 40-hour week." (Laughter.)

Mr. Durrell Thanked for His Address

A vote of thanks to Mr. Durrell for his interesting and instructive address was moved by G. W. Miller, Maintenance of Way, Eastern Region, C.P.R., who was First Vice President haps, we will have another venture following this one in the form of the St. Lawrence seaway. That seems to be a natural sequence to this large iron ore development. The rails which are being used to build this railway I understand are coming from Sydney. The bridge steel is coming from Canada—a portion of it. The ties are being cut partly in Canada and partly imported—not all Canadian ties I am told—but it is largely a Canadian venture of which we can be justly proud. I think it is history in the making again that we have this major railway construction programme under way. It is a long time since we built a railroad such as that which is now being built by Mr. Durrell and his company."

Railway Freight Traffic

Revenue freight carried by the Canadian railways in the first nine months of 1951 set a new high record for any similar period, at 117,914,808 tons.