

1—Main yard office; 2—hump; 3—master retarder; 4—retarder tower; 5—car repair shop; 6—car cleaning tracks; 7—west departure yard; 8—classification yard; 9—east departure yard; 10—receiving yard; 11—m/w building; 12—ice house; 13—west yard office; 14—diesel servicing area; 15—diesel shop; 16—fuel tank; 17—railway YMCA; and 18—piggyback tracks. The new yard cost \$15 million.

# CNR Opens Moncton Yard

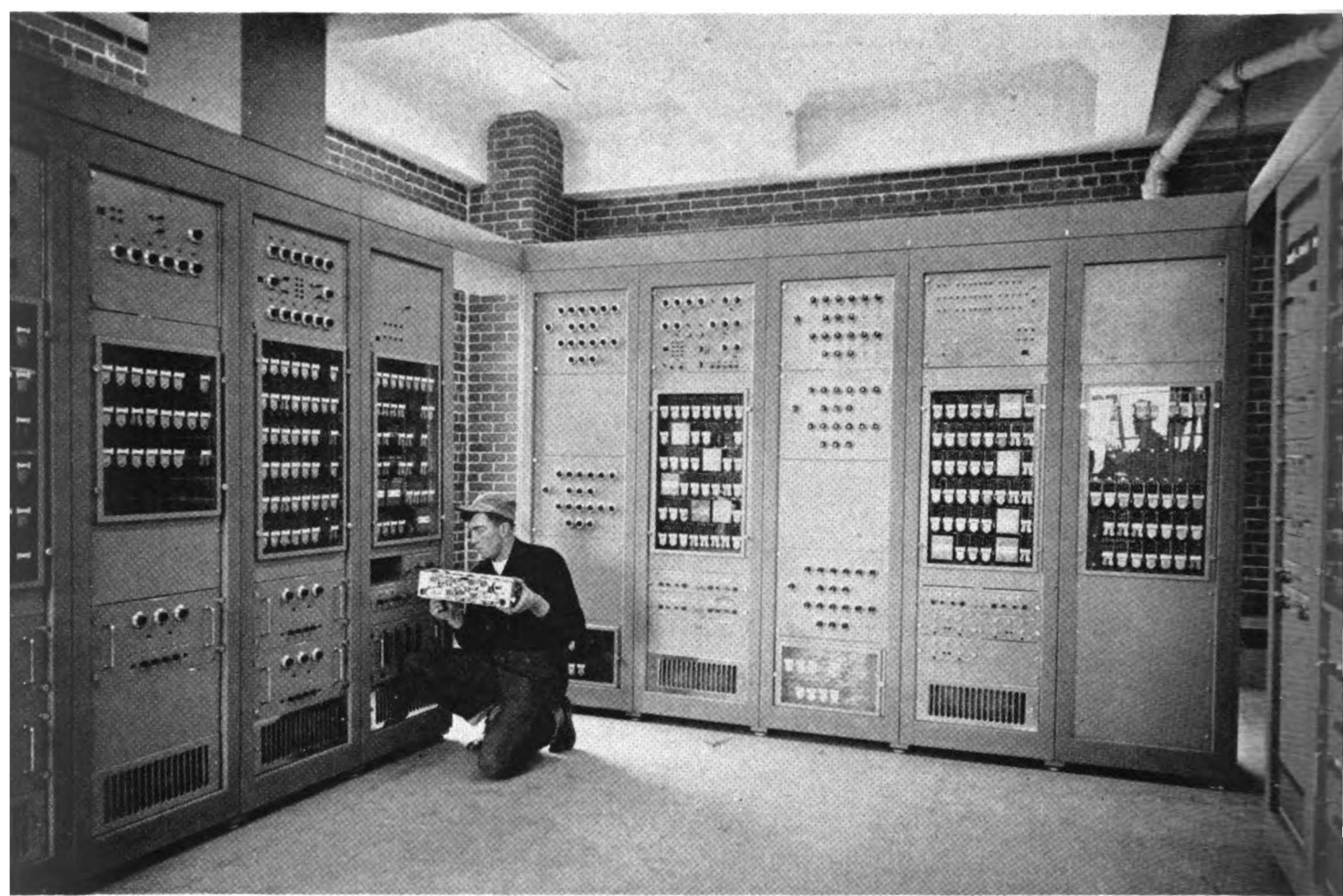
● Last month the Canadian National dedicated its new retarder classification yard at Moncton, N. B. The new yard replaces three old yards and cars clear the new yard in four hours, compared to 24 hours previously. With a working capacity of 3,500 cars a day, the new yard can easily handle the traffic through Moncton, which averages 1,400 cars daily, peaking to 2,000. The normal humping rate is one car every 15 seconds, or a 100-car train in 25 minutes.

Moncton, at the east end of New Brunswick, is a natural classification point for freight cars being handled between that province and Nova Scotia. The new Moncton yard is the first of four automatic classification

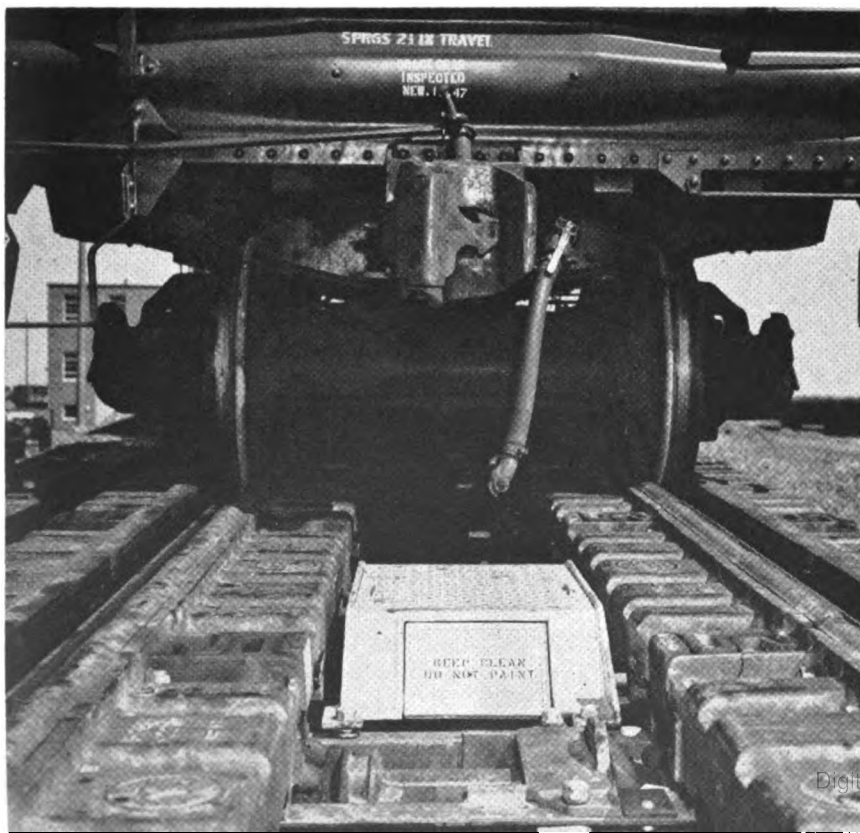


View approaching the hump with hump conductor's office in foreground and main yard office beyond. Hump conductor has automatic switching to route cars.

## CNR MONCTON YARD *continued*



Electronic analog computers calculate the speed at which cars should be released from the master and group retarders.



yards being built by the CNR across Canada. The others, now under construction, are at Montreal, Toronto and Winnipeg.

The GRS Class-Matic 2 yard automation system is used at Moncton. A new feature of this system, not previously available in the earlier systems, is that the distance to go to coupling on the class tracks is automatically fed into a computer if a car stops short on a class track. In earlier systems the retarder operator was required to press a button representing the shorter distance to go to coupling.

Cab as well as wayside hump signals are used. Aspects and indications are as follows: green, approach hump; yellow, proceed at 2 mph unless otherwise directed; red, stop; flashing red, back up.

◀ Radar unit in the master retarder provides a check on the car's velocity for comparison with the computer's calculated release speed for retarder control.

As trains arrive at Moncton yard they enter the receiving yard through remotely controlled interlockings. Arriving trains pass a television camera, which is focused on the sides of the cars. The car checker in the yard office watches the TV monitor and reads numbers and initials out loud, so they are recorded on a tape recorder. Later, the recording is transcribed and used in preparation of the switch list.

Car inspectors working in the receiving yard carry walkie-talkies. When they find a car which needs repair they radio the main yard office, giving the car's initial and number. When the train is classified, the hump conductor presses the automatic switching system pushbutton for the number of the bad order track.

For those who like statistics, here are a few concerning this yard. **Dimensions:** 830 acres—2.2 miles long, 2,700 ft wide.

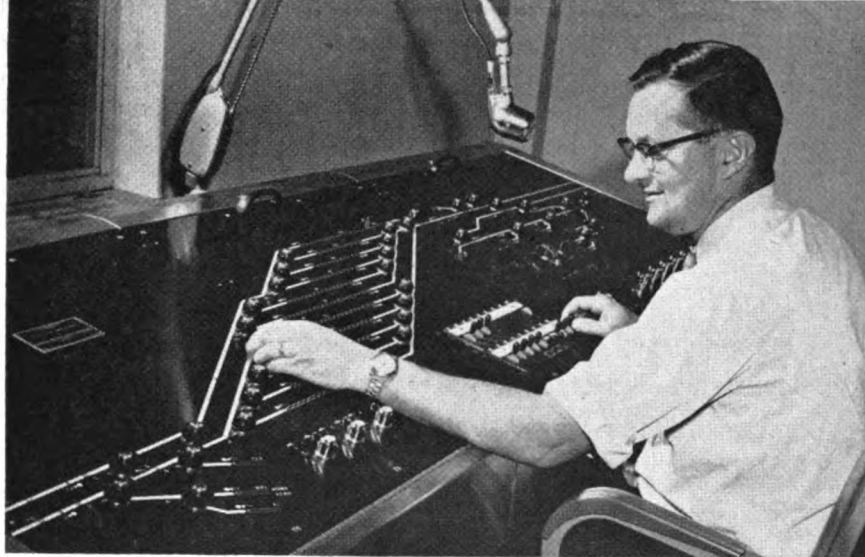
**Trackage:** 40 class tracks, 2,180 cars; 20 receiving and departure tracks, 2,097 cars; 6 cleaning tracks, 252 cars; 10 repair tracks, 160 cars; 7 local tracks, 331 cars; 5 piggyback tracks, 59 cars.

**Signaling:** 79 power switches; 1 master and 5 group retarders; automatic switching and automatic retarder controls; hump, cab and way-side signals; and yard entrances interlockings.

**Communications:** 96 paging and talk-back loudspeakers; 5 radio systems and 9 radio-equipped yard engines; 4 TV cameras and 3 monitors for car checking; 10 Teletype machines; 24 pocket radio transmitters and receivers, linked with 9 base radio stations used in car inspection and pulling cars from class tracks; 3 telephone exchanges and 6 tape recorders.

Writing freight car routing labels by use of Teletype machines has been introduced at Moncton yard. The CNR has divided its Canadian and U. S. trackage into 99 blocks. These blocks, in turn, are divided into zones. Cars are now labeled at the originating point, with the block and zone to which they are destined. Previously labels were attached at various points along the route, but under the new system at Moncton, only one label is sufficient to direct a car's movement from the loading station to its destination.

Label information, including a car's number, contents, initials, destination and servicing requirements, is transmitted from IBM punch cards to a Teletype machine in the hump conductor's office at the crest of the hump, where car classifying takes place. The Teletype writes the labels at the rate of 100 words a minute. The labels are stapled on the cars as they pass the hump conductor's office.



Interlocking controls switches and signals to entrances of receiving-departure yard. Operator has direct intercom lines to talk to dispatcher, yardmaster and others.



Yardmaster has keys for paging and talk-back speaker systems, radio and a dial for telephone calls. Panel at left indicates number of cars in classification tracks.



Retarder operator monitors the classifying process. GRS Class-Matic system provides automatic operation of retarders and class track switches. Indicators tell operator how many cars are in each class track.