

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
MISSOURI, KANSAS & TEXAS RAILWAY AT ATOKA, OKLAHOMA
JULY 4, 1920.

August 20, 1920.

On July 4, 1920, there was a yard collision between a freight train and cars standing on the main line in the yard at Atoka, Oklahoma, resulting in the death of 7 persons and the injury of 20 persons, all of whom were members of a carnival company, and the injury of 2 employees.

After investigation of this accident the Chief of the Bureau of Safety submits the following report.

This accident occurred on the Choctaw Division, McAlester District, which extends northward from Ray, Tex., to Muskogee, Okla., a distance of 160 miles. From Ray northward to Stringtown, a distance of approximately 61 miles, this is a double track line over which trains are operated by time-table and train orders transmitted by telephone, automatic block signals are also provided at crossovers and through Atoka yard.

This accident occurred in Atoka yard 6,585 feet north of the south yard limit board. Approaching the point of accident from the south, there is a tangent nearly a mile long, followed by a 1-degree curve to the left 423.3 feet long, and tangent track 73.6 feet to the point of accident; the grade for 2 miles is about .4 per cent descending for northbound trains. A test made subsequent to the accident disclosed that a car standing at the point of accident could be seen from the cab of an approaching locomotive at a distance of 810 feet, from the engineer's side, and 625 feet from the fireman's side, half of the end of the car being in view of those distances, there was a full view of the end of the car from the engineer's side of the cab a distance of 521 feet. The view was obstructed by cars standing on a parallel track on the inside of the curve. The weather was clear at the time of the accident.

The cars which were struck by the freight train were part of the equipment of the E. B. Reed Carnival Company which had arrived at Atoka in northbound extra 503 at 7.45 p.m. While this train was being switched for unloading, some of the cars were left standing on the southbound main line in the following order, beginning at the south end, E.B.R. sleeping car No. 80, E.B.R. coach No. 60, E.B.R. coach No. 70, E.B.R. sleeping car No. 50, E.B.R. baggage car No. 40, E.B.R. combination coach and baggage car No. 30, and 6 flat cars.

Extra 845, consisting of engine 845, 67 cars and a caboose, departed from May Yard at 8.35 p.m., and at Calera, 36.8 miles south of Atoka, crossed over to the southbound main line for the purpose of permitting passenger train No. 2 to pass. This train then proceeded northward on the southbound track in accordance with an order directing Extra 845 to use the southbound track from Calera to Stringtown, 7 miles north of Atoka, and giving it right over all opposing trains. This train arrived at Atoka at about 9.30 p.m., and while running at a speed variously estimated at from 4 to 25 miles per hour collided with the Carnival company's cars standing in Atoka Yard.

Fire broke out in the wreckage immediately after the collision and five of the six sleeping cars and coaches standing in the yard were damaged beyond repair by the collision and by fire, these cars being all of wooden construction, 25 to 40 years old. The front end of engine 845 was slightly damaged. All of the killed and injured except the two injured employees were occupants of the six cars. The employees injured were the conductor and fireman of extra 845.

Engineer Patrick of Extra 845 stated that he applied the brakes in the south end of Atoka yard for the purpose of reducing speed preparatory to stopping for water at that point, when the speed had been reduced from about 25 to about 8 miles per hour, he released the brakes, expecting to allow the train to drift down to the water crane, and then saw the cars standing on the main line about three car lengths ahead of his train, he immediately applied the brakes in emergency and reversed the engine, he thought the speed had been reduced from about 8 miles an hour when he first saw the cars to about 4 miles an hour when the collision occurred, and attributed his failure to stop in the space available to the descending grade and the momentum of his heavy train. He was familiar with the rules and instructions requiring extra trains to be operated completely under control within yard limits, and he admitted that on account of the limited range of vision at this point his train was not completely under control as required by the rules.

According to Fireman Adams and Conductor Little who was riding on the engine, the conductor first saw the standing cars when about six or eight car lengths distant, and he immediately called a warning to the engineer. The conductor said his train was running at the rate of 20 or 25 miles per hour when it passed the yard limit board, and 6 or 8 miles an hour when he saw the standing cars; he said that in view of the limited range of vision his train was not running under proper control. The fireman and the conductor both fell when they jumped off from the engine before

the collision occurred. The rear brakeman said he felt no jar on the rear end of his train when the collision occurred and thought it had made the customary stop for water at Atoka, he was not aware there had been a collision until he started toward the head end of his train and saw the burning cars.

Extra 503 arrived at Atoka at 7.45 p.m. and the cars in this train were placed in charge of the yard crew to be switched for unloading. Another train for the engine and crew of Extra 503 was made up, and at about 9.10 p.m. the caboose was placed on this train. At that time the conductor of Extra 503 told Yardmaster Gardner they would have to hurry or stock train Extra 845 would run around them. This was the first notice he had had regarding Extra 845. Shortly before the collision occurred he noticed that the block signal on the southbound track south of the standing cars was in the stop position, this was the first indication he had had that Extra 845 was running against the current of traffic on the southbound track. He started toward the standing cars and sent a switchman on the run to flag the approaching train, but the collision occurred before they reached the cars. Yardmaster Gardner estimated that Extra 845 was running at the rate of 25 miles per hour when the collision occurred. The force of the collision drove the six flat cars forward at a rate of speed of about 18 or 20 miles per hour, two car inspectors stated these cars passed them so fast that they were unable to catch them, but two switchmen caught them and brought them to a stop at a point about 25 car lengths from where they had started.

A test of the brakes on Extra 845 before departure from Ray disclosed that except for the brakes on 4 cars being cut out the brakes in this train were in proper operating condition. Engineman Patrick stated the brakes operated properly between Ray and Atoka and inspection of the equipment in this train after the accident also indicated that the brakes were in proper operating condition.

Dispatcher Carter stated that he issued an order for Extra 845 to run extra from Ray to Atoka, on arrival at Calera Extra 845 was crossed over to the southbound main track to permit train No. 2 to pass, and he issued an order to Extra 845 at Durant, 5 miles north of Calera, reading, "Extra 845 use southbound track Calera to Stringtown with right over all opposing trains."

Special time-table instructions provide.

"All trains must run under control through Muskogee, North Meadster, and Atoka yards, expecting to find main track occupied."

"Yard limit boards maintained at ... Atoka..."

"Yard Limit Boards protect yard engines working within yard limit against third and fourth class and extra trains only. See Rules 98-C and 98-E."

Rules 98-C and 98-E provide

"98(c) Third and fourth class and extra trains are required to approach and pass all water tanks, coal chutes, and yard limits completely under control"

"98(e) Yard limit boards define yard limits. Yard engines may work within yard limits against third and fourth class or extra trains, but will give way as soon as possible upon their approach."

This accident was caused by failure of Extra 845 to pass through Atoka yard under complete control as required by the rules, for which Engineman Patrick and Conductor Little are responsible.

The investigation disclosed that it was the practice for dispatchers to notify the yard force at Atoka in cases when first and second class trains are operated against the current of traffic and that similar information was also frequently furnished with respect to third and fourth class and extra trains operating against the current of traffic for the purpose of expediting the movement of these trains. Yardmaster Gardner stated that had he been informed that Extra 845 was running on the southbound track he would not have left the carnival company's cars standing on that track and the accident would not have occurred. The evidence indicated that Yardmaster Gardner talked over the telephone with Dispatcher Carter regarding the movement of trains but the dispatcher was not certain that he gave the yardmaster any information regarding Extra 845, while the yardmaster stated that he received no information whatever from the dispatcher regarding that train; the operator at Atoka knew that Extra 845 was approaching but was not aware until after the accident that it was running against the current of traffic.

The investigation disclosed that Extra 845 was diverted to the southbound track at Calera, but the order authorizing this train to run on the southbound track was issued to Extra 845 at Durant. It therefore appears that this train was operated against the current of traffic for a distance of 5 miles without an order covering this movement. The running order held by Extra 845 expired at Atoka while the right of track order on the southbound main line extended to the end of double track at Stringtown, 7 miles

north of the point where the running order expired. Although rule 98(e) refers only to yard engines, the dispatcher stated it was not his intention to have Extra 845 head in at the south switch, but to proceed on the southbound main line to the station where he expected to issue another running order; he construed rule 98(c) as giving this train authority to occupy the main track within yard limits.

The record in this case indicates that Dispatcher Carter had not been examined on the book of rules which became effective March 1, 1919, and his construction of the rules is not in accordance with their interpretation by other employees and officials. It was not established that there was any necessity for operating Extra 845 against the current of traffic, and Dispatcher Carter is open to criticism and censure for the manner in which he handled this train.

The cars which were destroyed as a result of this accident were old wooden equipment which, on account of their construction and condition, were crushed by the momentum of extra 845, and the wreckage of the wooden cars immediately caught fire, probably from oil stoves or lights, some of the occupants being fatally burned. Had the cars been of steel construction, the number of deaths and injuries would undoubtedly have been less and the suffering resulting from the fire would have been averted.

All of the employees involved in this accident were experienced men. The crew of Extra 845 had been on duty 3 hours and 50 minutes, at the time of the accident.