

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
CHICAGO, BURLINGTON & QUINCY RAILROAD AT RED CLOUD,
NEBR., ON MARCH 20, 1921.

April 23, 1921.

On March 20, 1921, there was a collision between a freight train and a switch locomotive on the Chicago, Burlington & Quincy Railroad at Red Cloud, Nebr., which resulted in the death of 2 employees. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

Location.

The Oxford Junction Subdivision, on which this accident occurred, extends between Oxford Junction and Red Cloud, Nebr., a distance of 62.03 miles, and is a single-track line over which trains are operated by time-table, train orders, and a manual block-signal system. Approaching the point of accident from the west there is a 1-degree curve to the left 3,025 feet long, followed by a tangent extending beyond the point of accident, about 2,925 feet distant. The grade is slightly undulating and at the point of accident is .08 per cent descending for eastbound trains. The accident occurred at about 5.20 a.m., and the weather at the time was clear.

Approximately 3,000 feet east of the west yard-limit board there is a switch leading from the main track to the yard lead, and known as the west switch. The yard tracks involved are numbered, from north to south, 1, 2, 3 and 4, the main track is north of track 1. The accident occurred on yard track 3, about 460 feet east of the west switch.

Eastbound movements through the west switch are governed

by a 2-position distant semaphore signal and a 2-position home semaphore signal, located about 5,000 and 2,200 feet, respectively, west of the west switch. The indications of the distant signal are caution and proceed, and of the home signal are stop and proceed; the night indications are red, green and white, for stop, caution and proceed, respectively. The home signal is connected with the switch lever of the west switch by means of wires, and the distant signal is electrically operated by means of a circuit breaker on the home signal mast, the connections being such that these signals can display clear indications only when the switch is set and locked for the main track. When they indicate caution and stop, respectively, the switch may be lined for the yard tracks, or for the main track providing that it is not locked. The distant signal is visible to the engineman of eastbound trains for 1,200 feet and the home signal for 900 feet; the home signal is visible for a somewhat greater distance from the left side of a locomotive.

There is no yardmaster employed at Red Cloud Yard, but a switch crew is on duty from 12 midnight to 10.00 a.m., and during these hours the foreman of this crew is in charge of the yard. It is customary for the switch crew, when convenient for them to do so, to line the switches for approaching trains in order to expedite their movement. This, however, can not be depended upon and it is the practice for eastbound trains en route for the yard to come to a stop at this switch while the head brakeman lines the switches for his trains. If a member of the switch crew has already per-

formed this service, he gives a proceed signal to the approaching train, which proceeds to the designated track without stopping.

Description.

Switch locomotive 1675, in charge of Foreman Arnell and Engineman Lawrence, had backed from the east end of the yard on the main track, headed through the west switch to the yard lead, and, leaving the switch open, began making up a westbound train. It had taken a car from track 1 and moved it on track 3, and was standing into clear on this track, about 460 feet from the west switch, headed east, with 25 cars east of the locomotive, when it was struck by extra 1950.

Eastbound freight train extra 1950, in charge of Conductor Hinshaw and Engineman Riley, consisted of 41 cars, 1 drover's coach and a caboose, hauled by locomotive 1950, and was en route for Red Cloud Yard. It passed Inavale, the last open telegraph office, 7.1 miles west of Red Cloud, at 5.10 a. m., passed the distant signal displaying a caution indication, entered the yard limits without reducing its speed, passed the home signal displaying a stop indication, passed through the west switch to the yard lead, passed through the switch leading to track 3, and while running at a speed variously estimated between 15 and 35 miles an hour, collided with switch locomotive 1675.

The force of the collision moved locomotive 1675 and the cars ahead of it a distance of 1.5 feet. The tender was

driven against the boiler head and the entire locomotive lifted from the rails, telescoping a box car immediately ahead. The second car ahead was totally destroyed, while the next three cars were overturned, but not seriously damaged. Locomotive 1950 remained upright and only the front pair of driving wheels were derailed, but the first 10 cars in its train were destroyed. The employees killed were the engineman of the switch locomotive and the fireman of the freight train.

Summary of evidence.

The members of the switch crew stated that their locomotive had just come to a stop on track 3 and that the switches were still lined for the movement from the main track to track 3 when extra 1950 was seen approaching. Switchman Sutton, acting on instructions from Foreman Arnell, went to throw the two switches which had to be changed in order to line up the route for extra 1950 to head in on track 2. He walked to the switch leading from track 2 to track 1, threw it, and on starting for the switch leading from the yard lead to track 2 saw that extra 1950 was close to the yard and began to run, seeing that he could not reach the switch ahead of extra 1950, he began violently giving stop signals. These, however, were not acknowledged and extra 1950 passed at a high rate of speed and collided with the switch locomotive. These employees also said the signals were functioning properly, and that the west switch light and both headlights on the switch locomotive were

burning at the time. Switchman Sutton stated that extra 1950 was working steam until the west switch was reached.

Engineman Riley, of extra 1950, stated that he became lost in the vicinity of the distant signal, passed it without seeing it and was not even looking for it; until very near the home signal he thought that signal was the distant signal and that it was displaying a clear indication; its light was so dim he could not distinguish its color, but the board appeared to be in the clear position; he looked up at it just before passing it and thought that the light was red. He thought the speed of his train was about 33 or 35 miles an hour at that time. When he saw that the switch was open and the switch light red, he thought the switch crew had lined it up for his train to enter the proper yard track; but on receiving no signal from the switch crew and seeing that there were cars on two tracks, with a switchman running up the track, he applied the air brakes, called a warning and jumped. He said that he had made a 12-pound brake-pipe reduction after passing the home signal, and that when the locomotive reached the west switch he put the brake valve in emergency position, but only got the effect of a full service application, he did not think the speed had been materially reduced at the time of the accident, although he estimated that the speed at the time of the accident was about 20 miles an hour. Engineman Riley said he shut off steam about a mile west of the home signal, but several other employees, including Head Brake-

man Stewart, stated that steam was used until near the west switch. He admitted that he was not operating his train under control within yard limits.

Head Brakeman Stewart, who was riding in the left side of the cab, said he saw the caution indication of the distant signal and supposed the engineman intended to stop at the home signal, he also saw the stop indication of the home signal, but when the engineman disregarded its indication he supposed he had received a proceed signal from some one in the yard, his statements also indicated that the engineman on previous occasions had seemed to be irritated by his calling attention to signals, and that this was also one reason why he said nothing to the engineman about passing the signals. Brakeman Stewart looked ahead for signals, saw a switchman running and giving stop signals, and noticed the switch locomotive on track 3, and about the time the west switch was reached he called to the engineman, who immediately applied the brakes in emergency. He thought the speed had been reduced to 10 or 15 miles an hour at the time of the accident.

Rear Brakeman Ehlers, who was riding in the cupola, said he saw the caution indication of the distant signal and the stop indication of the home signal, and realizing that the speed was high under the circumstances made some remark about the matter to the conductor, who was working at his desk. Just what was said, or just where the train was at the time the matter was called to the conductor's attention,

was not definitely determined. Conductor Hinshaw asserted positively that the only thing said was something about the location of the train and that the collision occurred within a few seconds, before he had time to do anything. He also stated that on account of being busy with his work he did not realize that they were near Red Cloud or that the speed limit was being exceeded. The statements of Brakeman Ehlers indicated that the train was brought to a stop about 20 car-lengths east of where the first application of the brakes was made, while Conductor Hinshaw thought the accident occurred about 10 seconds after the brakes were applied.

Examination of the signal apparatus after the accident, showed it to be in good condition, with all lamps burning and the lenses clean and without defects. The weight of testimony, as well as tests of the undamaged equipment made after the accident, indicated that the air brakes of extra 1950 were in proper working order.

Examination of the train sheet indicated that extra 1950 traveled the distance of 5 miles between Naponee and Bloomington in 5 minutes, or at a rate of 60 miles an hour, also that it traveled the distance of 7.1 miles between Inavale and Red Cloud in 10 minutes, or at a speed of about 42 miles an hour, the speed of freight trains over this territory is restricted by time-table rule to 35 miles an hour.

Conclusions.

This accident was caused by the failure of Engineman Riley, of extra 1950, to observe and be governed by signal

indications, and by his failure to have his train under proper control within yard limits.

Under operating rule 93, extra trains are required to move within yard limits prepared to stop unless the main track is seen or known to be clear. Engineman Riley admitted that he was traveling within yard limits without having his train under proper control and said he must have been going faster than he realized at the time. Bulletin 1503 requires that trains approaching station protection signals in stop position will stop and proceed under caution through the station limits. Engineman Riley did not realize until he was close to the home signal that he had passed the distant signal without seeing its indication, as he was passing the home signal he saw that it was displaying a red light, but even then he did not take prompt measures to bring his train to a stop, taking it for granted that the switch crew had lined the switch for his train to head in on the proper yard track.

Engineman Riley entered the service of the company as a fireman in March, 1906, and was promoted to engineman in August, 1915. He had been censured several times, once demoted from engine^{man} to fireman, and on another occasion called before the officials and informed that there must be a decided improvement in his work if he was to remain in the service of the company.

At the time of the accident the crew of extra 1950 had been on duty about 12 hours, after off-duty periods of from

about 15 hours to 28 hours, and the crew of the switch locomotive had been on duty a little more than 3 hours, after 15 hours off duty