

No. 208
July 25, 1914.

**IN RE: INVESTIGATION OF ACCIDENT ON THE ATCHISON, TOPEKA,
& SANTA FE RAILWAY NEAR BAGDAD, CALIF., ON JUNE 12, 1914.**

On June 12, 1914, there was a collision on the Atchison, Topeka & Santa Fe Railway near Bagdad, Calif., which resulted in the death of 2 passengers and the injury of 51 passengers and 17 employees. After investigation of this accident the Chief Inspector of Safety Appliances reports as follows:

Westbound freight train extra No. 1644 consisted of 38 cars and a caboose, hauled by locomotive No. 1644 and was in charge of Conductor Kelman and Engineman Vanderbeck. Extra 1644 reached Bagdad, its western terminal, at 7:10 p. m. and headed in on the southbound passing track. The train was then cut in two behind the 19th car and the first 19 cars were backed in on the south house track, which leads off of the southbound passing track. The locomotive then coupled to the rear portion of the train and pulled ahead on the passing track until it was opposite the station, where it stopped while some freight was unloaded. The train then headed out onto the main line, and when the caboose had cleared the switch leading to the northbound passing track that switch was opened and the cars backed in on the passing track with the intention of placing them on the north house track. While these cars were being placed on the house track the main line switch was left open. Locomotive No. 1644 had backed the cars in to clear and was about 475 feet east of the main line switch when it was struck by eastbound passenger train No. 4.

Eastbound passenger train No. 4 consisted of 1 combination car, 1 dining car and 4 Pullman sleeping cars and 1 observation car, hauled by locomotive No. 1376 and was in charge of Conductor Barrows and Engineman Grace. The combination car had a steel underframe and the dining car was of reinforced wooden construction. While the 4th sleeping car had a steel underframe; all of the other cars were of all-steel construction. Train No. 4 left Barstow, Cal., its last stopping point, at 5:55 p. m., passed Haynes, the last station west of Bagdad and 3.6 miles distant therefrom at 7:36 p. m., on time, and collided with extra 1644 at about 7:40 p. m. while running at a speed estimated to have been about 30 or 35 miles per hour.

Both locomotives were damaged to some extent while the forward end of the dining car was telescoped a distance of about 34 feet by the combination car, while the rear end of the latter car was damaged a distance of about 13 feet. None of the other cars in the passenger train was damaged. The freight car immediately behind locomotive No. 1644 was damaged to some extent, while 4 cars in the middle of the 19 cars being handled by that locomotive buckled and were more or less damaged, one of them being destroyed.

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The division of the Atchison, Topeka & Santa Fe Railway on which this accident occurred is a single track line. No block signal system is in use, trains being operated by train orders and time-card rights. The track is on a fill 3 to 5 feet in depth with a descending grade for eastbound trains of 1.4 per cent, about 1 mile in length. The west switch of the north passing track is located near the middle of the curve of one degree leading to the right for eastbound trains. Approaching this curve from the west there is a tangent about 1,500 feet in length, a curve of 40 minutes to the right, about 750 feet in length, then another tangent about 1,650 feet in length. The view is unobstructed and the weather at the time was clear.

Train No. 4 was due to leave Bagdad at 7:45 p.m. No arriving time being shown. Rule No. 92-A of the operating book of rules reads as follows:

"A first class train must not arrive at a station where only the leaving time is shown more than five minutes in advance of its schedule leaving time."

Under this rule therefore train No. 4 was not permitted to arrive at Bagdad before 7:40 p.m. The statements of the employees on train No. 4 indicated that the train passed Haynes at 7:35 p.m. or a few seconds thereafter. Their statements as to the time of collision varied, however, the flagman stating that it was 7:40 p.m. when he picked himself up after the shock of the collision and he therefore thought the accident occurred at about 7:35 p.m. The engineman said it was 7:42 p.m. when he passed the whistling post located about 1,600 feet west of the west switch, while the fireman did not notice the time. Conductor Barrows said it was 7:40 p.m. when the engine whistled for the station, while the head brakeman said it was 7:42 p.m. or 7:43 p.m. when the collision occurred.

Conductor Holman, of extra 1844, stated that after the locomotive had been coupled to the rear portion of the train and was on its way to the western end of the south passing track for the purpose of heading out on the main line he looked at his watch and thought it was 8:35 p.m. when as a matter of fact it was 7:35 p.m. The head brakeman opened the south passing track switch while he himself opened the north passing track switch. When the train was backing in on the north passing track he heard the whistle of an approaching train and told the head brakeman that there was an extra freight train coming. The latter at once got off but had gone only a few car lengths when the conductor realized that he had made a mistake in the time and that the approaching train was passenger train No. 4. He had figured that before the arrival of train No. 4 there was time enough after placing the cars on the house track to cut off the engine, head out on the main line, close the switch and place the engine on the engine track. He

started forward just as the collision occurred and when about six or eight car lengths from the caboose looked at his watch at which time it was 7:40 p.m. He further stated that when the train was being backed in on the north passing track both brakemen rode on the caboose, the head brakeman having opened the switch and then boarded the caboose as it backed by him. The head brakeman then dropped off near the house track switch in order to pass signals. This resulted in no one being left at the open main line switch. About five or ten minutes after the collision the head brakeman showed his watch to him and said "there is the cause of it" meaning that his watch had stopped. As he remembered it the brakeman's watch had stopped at 7:30 p.m. He had not compared watches with him.

Engineman Vanderbeck stated that after backing in on the north passing track, clear of the main line, the fireman asked him if the brakeman was on his side of the train, he was not, and this was the first intimation Engineman Vanderbeck had that the brakeman had not remained at the main line switch to close it. He then looked at his watch, saw that it was 7:57 p.m., and remarked to the fireman that train No. 4 was due at 7:48 p.m. The fireman then said that he would close the switch. The engine-man told him to hurry and the fireman then said that he saw a headlight. While the fireman was starting for the switch Engineman Vanderbeck began to back his train faster and then went over to the fireman's side to see if he succeeded in reaching the switch. When he saw that the fireman was too late he jumped back to his own side of the locomotive and opened the throttle wide, being on the seat box at the time of the collision. He stated that the collision occurred at 7:38 p.m. He also stated that he had not been working for two or three days prior to going out on this trip and that during that time his watch had not been compared, neither had he compared it before going out on the trip.

Head Brakeman Barraclough stated that after extra 1644 had headed out on to the main line he closed the switch and boarded the caboose as it was backed past him on to the north passing track in order to get some matches and a drink of water, getting off at a point about six car lengths east of the north passing track switch. His intention was to catch signals and at the same time walk towards the switch and be near enough to it so that he could close it in case the engine did not come back to the main line. He had not moved over a car length towards the switch when the collision occurred. He knew that he was the only member of the train crew near the switch. After the collision he looked at his watch and it showed the time to be 7:30 p.m., this being the same time it had shown when the train pulled out of the south passing track. Just as he dropped off the caboose the conductor said that there was an extra coming and he intended to go forward and head it in on the southbound passing track.

Rear Brakeman Klinglesmith rode on the caboose when the train was being headed out on to the main line and he opened the

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switch leading from the north passing track to the north house track. He then opened that switch and boarded the caboose as it backed past him and at once climbed on to the roof. Just as he got there he saw train No. 4 approaching and thought that less than a minute elapsed between that time and the time of the collision. He further stated that his train pulled out of the south passing track at 7:35 p.m. or 7:37 p.m. and was in to clear on the north passing track at about 7:39 p.m. and that the collision occurred between 7:39 p.m. and 7:40 p.m.

Fireman Mott stated that after backing in on the north passing track neither he nor the engineman could see the brakeman going to close the switch and he at once got off the locomotive to attend to it himself. At this time extra 1644 was about one or two car lengths in to clear. He had looked at his watch before getting off the engine and it was then 7:37 p.m. and he thought the collision occurred about two minutes afterwards.

Engine Crase, of train No. 4 stated that it was about twilight when his train approached Bagdad and at first he did not see the red light on the switch stand. As his train came around the curve he saw the position of the switch target when the electric headlight shown on it and he at once applied the brakes. He looked at his watch just after passing the whistling post and it was then a few seconds after 7:42 p.m. He estimated that the speed of his train at the time was about 35 to 40 miles per hour.

This accident was caused by an open switch, for which the crew of extra 1644 was responsible.

Rule No. 87 of the operating book of rules provides as follows:

"Extra trains must clear the time of regular trains five minutes unless otherwise provided, and will be governed by train orders, with respect to opposing extra trains."

The time-card in effect at the time of the accident showed only the time at which train No. 4 was due to leave Bagdad, 7: 45 p.m., and under rule No. 92-A train No. 4 would have been permitted to arrive at Bagdad at 7:40 p.m., while under rule No. 87 extra 1644 was required to clear this time by five minutes; in other words extra 1644 had to be in to clear and the switch lined up for the main line at 7:35 p.m. According to their own statements the crew of extra 1644 allowed their train to be on the main line after 7:35 p.m. while the main line switch was not closed at any time.

All of the employees involved in this accident were experienced men. The crew of the freight train had been on duty 13 hours, after a period off duty of 12 hours.