

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
ST. LOUIS-SAN FRANCISCO RAILWAY NEAR KELLYVILLE,
OKLA., ON SEPTEMBER 28, 1917.

October 26, 1917.

On September 28, 1917 there was a head-end collision between a passenger train and a freight train on the St. Louis-San Francisco Railway near Kellyville, Okla., which resulted in the death of 22 passengers and 1 employee and the injury of 57 passengers and 5 employees.

After investigation the Chief of the Bureau of Safety reports as follows:

The Oklahoma Subdivision upon which this accident occurred is a single-track line extending from Sapulpa to Oklahoma City, Okla., a distance of 105.1 miles. Train movements are governed by time table and train orders transmitted by telephone, there being no block signal system in use.

Westbound passenger train No. 407 consisted of one baggage car, one mail car, two coaches, one chair car, three sleeping cars, and one official car, in the order named, all of wooden construction except the baggage car which was an all steel car. This train was hauled by locomotive 1085 and was in charge of Conductor Temple and Engineer Fuhl. It was en route from St. Louis, Mo., to Lawton, Okla., and at Sapulpa, Okla., the crew in charge received the following train orders:

No. 58. "Extra 1342 East has right over No. 407 Depew to Kellyville."

No. 61. "No. 408 gets this and meet 407 at Kellyville."

This train left Sapulpa at about 2.12 p.m., arrived at Kellyville, 7.8 miles west of Sapulpa, at 2.37 p. m., at which place trains Nos. 408 and extra 1343 were on the passing track, left Kellyville at 2.39 p.m., and collided with extra 1342 at a point 2.3 miles west of Kellyville, near bridge 447.6, at about 2.42 p.m., while running at a speed variously estimated to have been from 15 to 30 miles an hour.

Eastbound freight train 1342 consisted of 29 empty passenger cars (empty troop equipment), two loaded box cars, and a caboose, hauled by locomotive 1308, and was in charge of Conductor Huff and Engineer O'Hara. It left Oklahoma City at 10.30 a.m., and at Depew the crew in charge received a copy of train order No. 58, left there at 1.47 p.m., passed Bristol, 13.4 miles west of Kellyville, at 2.12 p.m., and collided with train No. 407, as above stated.

The front end and smoke box of locomotive 1025 was crushed, pilot and pilot beam torn off, front end of frame bent, both cylinders torn off, and engine truck and front drivers derailed. The connection between locomotive and tender was crushed, front end of tender frame badly damaged and cistern torn loose from frame and jammed against head end of the baggage car, which was an all steel car. The rear truck of the baggage car was derailed and the car slightly damaged. The wooden mail car immediately behind the baggage car was destroyed on account of its underframe overriding the underframe of and telescoping the following coach its entire length and demolishing that coach. This coach was a three compartment car, the two forward compartments being used for negro passengers, and all the persons killed and practically all the injured were in it. The other cars in this train sustained only slight damage. Locomotive 1322 had its front end and smoke box bent, the pilot and the pilot beam torn off, front end of frame broken off, right cylinder broken off and locomotive generally damaged. The tender cistern was torn loose from its frame and telescoped the front end of the baggage car immediately behind it, the baggage car being derailed and seriously damaged. The second car was slightly damaged, the third car was badly damaged and partially telescoped by the fourth car. The fourth, fifth and sixth cars were derailed and destroyed. The other cars were not seriously damaged. The weather at the time was clear.

Approaching the point of accident from Kellyville the track is tangent for a distance of 5,050 feet, followed by a 1-degree curve to the right 326 feet long, and then tangent 5,365 feet to the point of collision. The grade for the first mile west of Kellyville is generally descending, varying from 1 to .55 per cent, and the remainder of the distance to point of accident is level. Approaching the point of collision from the west the grade is slightly descending for a distance of 2,300 feet, then it is practically level for 912 feet, continuing around a 1-degree 40-minute curve to the right; then there is a tangent 375 feet long, and practically level, then a 4-degree curve to the left 1,920 feet long, followed by a slightly descending tangent 522 feet long to the point of collision. The track at this point is on a fill of about four feet.

Engineman Ruhl of train No. 407 stated that he received copies of train orders Nos. 58 and 61, at Sapulpa, directing him to meet trains Nos. 406 and extra 1322 at Kellyville, handed them to the fireman who read them and gave them back to him. He then read them to the fireman, and after comparing watches and orders with the conductor the train departed. When the train reached Kellyville he saw train No. 406 and extra 1345 which he took

to be extra 1322 on the siding. As he came opposite the engine of extra 1343 he saw a figure 13 on the sand dome and thought he also saw a figure 2, and became convinced that the train was extra 1322. He said that he intended to look at the caboose of that train and verify the number but as his train left Kellyville the conductor pulled the whistle signal and he overlooked the caboose until after he had passed it. He stated that his train was within about 200 yards of bridge 447.8, located about two miles west of Kellyville, and running at a speed of about 30 miles an hour, when he saw extra 1322 approaching about 2,500 feet away. He shut off steam, applied the brakes in emergency, put sand on the rails, sounded the whistle, reversed the engine and jumped, the speed of the train having been reduced to about 15 miles an hour at the time of the collision. He stated that he had had no difficulty in controlling the speed of the train by the air brakes, as they were working good, the train line pressure being 80 pounds when the train was at Kellyville and about 70 pounds just before the collision. He said that he had started out of the cab window on the left hand side of the locomotive to close the drain cocks on the air pump when he discovered extra 1322 approaching, and had been away from his side of the engine only a few seconds, but did not think that his absence from his side of the cab contributed to the accident. Engineman Ruhl stated that he had never had a regular passenger run but had done some extra passenger work during the past two years.

Fireman Caterton of train No. 407 stated that before leaving Sapulpa, Engineman Ruhl showed him train orders 58 and 61. When he reached Kellyville he saw train No. 408 and an extra train there but did not ascertain the number of the extra, nor did the engineman say anything to him about its number. He stated that the extra was on the engineman's side of the train and he did not think there was any obstruction that would prevent the engineman from seeing its number. He said that after leaving Kellyville he first saw extra 1322 when his train had reached bridge 447.8 and the engineman had just gotten out on the running board to close the drain cocks, the engineman being the first to see that train. He said that the engineman had been away from the engineman's side of the engine about a minute when he saw extra 1322. He thought the speed of his train was about 25 miles an hour when he first saw extra 1322 and that its speed had been reduced to 25 or 30 miles an hour before the collision occurred.

Conductor Temple of train No. 407 stated that he received train orders 58 and 61 at Sapulpa, delivered copies to the engineman and had him read them to him aloud,

gave his copies to the brakeman, and the train left there at 8.15 p.m. When the train reached Kellyville he looked out and saw train No. 406 and a freight train there, looked through the glass door to see the number on the engine of the freight train but saw only one figure which he took to be a "2". He thought that inasmuch as the engine of his train came to a stop near the engine on the freight train, the engineman had gotten the correct number, and he gave him a signal to pull down to the lower end of the yards, and later gave him a stop signal in order to put a drunken man off the train. After that was done the porter gave the engineman a proceed signal. Conductor Temple said that he told the porter that they were to meet train 406 at Kellyville and that extra 1322 had rights over their train to Kellyville, but did not say anything to the brakeman, as he had the orders and could read them himself. He said that he saw members of the crews of trains 406 and extra 1343 at Kellyville, but did not talk with them and made no inquiries as to the identity of the trains. He admitted that he was required to make sure that the two trains at Kellyville were the ones his train was to meet before leaving there, but thought the engineman had seen the train numbers and was satisfied, and admitted that the failure to comply with these train orders was the direct cause of the accident. He stated that he had been in extra passenger service for 10 or 12 years and had made three trips on this run previous to the accident.

Brakeman Leitwein of train No. 407 stated that he saw train No. 406 and another train at Kellyville but did not see the number of the other train. Before reaching Kellyville the conductor gave him several train orders but he had only read the one directing his train to meet train No. 406 at Kellyville, and intended to read the other orders when he got time.

Engineman O'Hara of extra 1322 stated he received a copy of train order No. 58 at Derow, left there and was passing around the curve near mile post No. 448 when the fireman, who was on the inside of the curve, called to him and he applied the air brakes in emergency, the speed of his train being about 25 miles an hour at the time. His train moved about the length of two telegraph poles when he saw train No. 407 on bridge No. 447.8, a distance of about five or six telegraph poles away, and his train collided with it at a speed of 8 or 10 miles an hour. He said that the brakes were working good and he had had no difficulty in making stops.

Fireman Tolbert of extra 1322 stated that his train was within about 400 yards of bridge 447.8 when he saw train No. 407 a short distance east of the bridge and called to Engineman O'Hara to get off the engine, the speed of his train being 20 or 25 miles an hour, but thought its speed had been reduced to 8 or 10 miles an hour at the time of collision. He stated that the accident occurred about three car lengths west of bridge 447.8.

Conductor Huff of extra 1322 stated that he received train order No. 58 at Depew giving his train right of track over train No. 407 to Kellyville, and that he was riding in the caboose of his train at the time of the accident and did not see train No. 407 until after the collision.

Engineman Trone of extra 1343 stated that his train was standing at Kellyville when train No. 407 reached there and the engine of that train came to a stop about 2 car lengths from the engine on extra 1343 and there was nothing to prevent Engineman Ruhl seeing its number. He said that Engineman Ruhl was looking out of the cab as he passed but he did not speak to him.

Conductor Hugh of extra 1343 stated that the caboose of his train was equipped with indicators and that these indicators were displayed at Kellyville in such manner that the crew of train No. 407 could have seen the number of the train.

Dispatcher Coombs stated that extra 1343 reached Kellyville on a time order and on account of work to be done it met train No. 407 there. He stated that the crew of train 407 had no knowledge of any trains to be met at Kellyville except train 408 and extra 1322; he knew extra 1343 would be there when train 407 arrived but was not sure that he knew of that fact before the crew of train No. 407 signed for their orders at Sapulpa. It did not occur to him that train No. 407 having orders to meet two trains at Kellyville would become confused if there were more than two trains to be met there. He stated that the rules did not provide for a middle order, but had such an order been put out at Kellyville he thought the operator there would probably have held train No. 407 until the arrival of extra 1322 and prevented the collision. He stated that if he had instructed the operator at Kellyville to hold train No. 407 until the arrival of extra 1322, the operator would have done so, but the rules did not require it, it had never been customary for the dispatcher to do so and the "dispatcher does not have time to safeguard every meeting point he makes in this way."

A few days after the accident a test was made with a locomotive headed ^{North} to determine the range of vision of the engineman of train No. 407 approaching the point of collision. From the point where the engineman said he first saw extra 1322 he could have seen that train at a distance of 2,537 feet, had he been on the engineman's side of the locomotive. It was impossible to see farther on account of the curve and trees alongside the track. From the fireman's side of the locomotive, the side the engineman was on when he first saw extra 1322, he could have seen the approaching train at a distance of approximately 2,300 feet.

This accident was caused by the failure of the crew of train No. 407 to obey a train order and meet extra 1322 at Kellyville.

Both the engineman and conductor of train No. 407 received and understood train order 58 and expected to meet extra 1322 at Kellyville. Upon their arrival there they saw extra 1343 on the passing track and erroneously assumed that it was extra 1322 and left there without making sure of its identity. It was their duty to be absolutely sure that extra 1322 was at Kellyville before leaving there. Such carelessness and dereliction of duty on their part is inexcusable and their failure to identify this train is directly responsible for this accident.

Brakeman Leitwein is also at fault for not reading train order No. 58 and becoming acquainted with its terms, and had he done so, he might have discovered the error of the engineman and conductor in time to have prevented the collision.

As previously noted, no block signal system is in use on the Oklahoma Subdivision of this railroad. The inherently weak train order system is used but not in the most efficient manner. Rule 139 of the standard code of rules adopted by the American Railway Association provides that when practicable a copy of a meet order must be transmitted to the operator at the meeting or waiting point. There was an open telegraph office at Kellyville, equipped with all the necessary facilities which would make it practicable to furnish the operator there with a copy of train order No. 58, and had he been furnished with a copy of that order it is highly probable that train No. 407 would not have left Kellyville before the arrival of extra 1322 and the accident would not have occurred. The operating rules of the St. Louis-San Francisco Railway do not provide for a middle order,

If the maximum efficiency of the train order system is to be utilized, the rules should require the use of the middle order, and until it is put in use or an adequate block signal system installed and put in operation, accidents such as this may be expected to occur.

Conductor Temple was promoted to conductor in 1901, and after being suspended for 10 or 15 days on two occasions and receiving a total of 15 demerit marks on two other occasions, he was barred from passenger service in 1903. In 1906 he was relieved of a local run on account of unsatisfactory service, relieved from service in 1907 and reinstated in 1909. In 1912 the officials agreed to let him enter passenger service when additional passenger conductors were needed and since then he has received 20 merit and 45 demerit marks or 50 merit and 145 demerit marks since he was promoted to conductor in 1901.

Engineman Ruhl entered the service as a fireman in 1905 and on account of unsatisfactory service as an engineman he was reduced to fireman on January 1, 1912. On June 30, 1912 he was restored to his position as an engineman and since then his record is clear.

At the time of the accident the engine crew of train No. 407 had been on duty about 2 hours and the train crew about 8 hours and 45 minutes. The crew of extra 1332 had been on duty about 9 hours.