

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
TEXAS & PACIFIC RAILWAY NEAR HIGH, TEXAS, ON
SEPTEMBER 20, 1920.

November 13, 1920.

On September 20, 1920, there was a head end collision between the detached portion of a circus train and a freight train on the Texas & Pacific Railway near High, Texas, resulting in the death of 1 circus employee and the injury of 9 circus employees. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

This accident occurred on the Paris sub-division of the Fort Worth Division, which extends between Texarkana, Texas, and Bonham, Texas, a distance of 127 miles. This is a single-track line, over which trains are operated by timetable and train orders, no block-signal system being in use. In the vicinity of the point of accident the line is tangent for a considerable distance in each direction. Beginning about 1,600 feet west of High, and proceeding eastward the grade varies from 1.35 per cent to 0.15 per cent descending for a distance of 3,400 feet then there is a slight ascending grade for about 700 feet to the point of accident. At the time of the accident the weather was clear.

Westbound circus train extra 295, in charge of Conductor Burton and Engineman Voyles, consisted of 1 coal car, 14 flat cars, 1 combination baggage car and coach, 1 horse car, 1 box car, 3 sleeping cars, 1 combination baggage car and coach, 1 dining car, 1 sleeping car, 1 business car and a caboosc, in the order named, hauled by engine 295, and contained effects of the Great Southwestern Exposition Shows. Extra 295 left Clarksville, Texas, its initial station at 7.20 p.m. September 19, left Paris at 10.30 p.m. and had proceeded about 12 miles when at 11.30 p.m. it stalled with the rear of the train 1,600 feet west of High. The engine and first 11 cars were uncoupled and proceeded to Petty, a distance of 3 miles, while the rear of the train was left standing on the main line. About 25 minutes afterwards the rear portion started moving backward, and after running 4,000 feet collided with extra 330 at a point 2,400 feet east of High. It is estimated that at the time of the accident the runaway cars were moving at a speed of from 15 to 20 miles per hour.

Westbound freight train extra 330, in charge of Conductor Kitchell and Engineman Hayes, consisted of 18 cars and a caboosc hauled by engine 330. It arrived at Paris at 8.35 p.m. and departed at 11.00 p.m. Approaching High the engineman saw the markers of a train ahead and brought his train to a stop. Concluding that the train was extra 295 and that it had

stalled, he detached his engine and proceeded toward the rear of the train with the intention of assisting it over the grade. The engine was stopped about 5 telegraph poles from the rear of the train by Flagman Quinn, who informed Engineman Hayes that Extra 295 was doubling the hill. Engine 330 carried Flagman Quinn up to a point about 1 telegraph pole from the rear of his caboose, and then returned to its train. At about 12.20 a.m. Engineman Hayes, while sitting on his seat box, observed that the markers on the rear of extra 295 were moving and appeared to be getting nearer, and about the same time saw a back-up signal given from the right side of the train of extra 295. Realizing that the rear portion of extra 295 was moving backward, he reversed his engine in an attempt to back away from the on-coming cars, but on account of the weight of his train, and the rail being wet, he succeeded in moving the train backward but 7 or 8 car-lengths, and had attained a speed of only 8 or 10 miles an hour, when it was struck by the detached portion of extra 295.

The front end of engine 330 was slightly damaged. The caboose and five rear cars of extra 295 were also damaged, the fourth car telescoping the fifth car a distance of 6 feet. None of the equipment of either train was derailed.

Conductor Burton of extra 295 stated that before leaving Clarksville he personally inspected the train; the ten cars on the rear had hand brakes but he did not know whether they were in working order; the 14 flat cars were not equipped with hand brakes as far as he knew; he went over the cars three times while at Clarksville and did not notice any hand brakes. Before leaving Clarksville the air brakes were coupled up and tried and apparently worked all right except that the brakes on baggage-coach 32, the tenth car from the caboose was cut out on account of an angle cock being broken off. The signal line was coupled up and used as a train line on that car.

He also stated that engine 330 helped extra 295 out of Clarksville, that they had no further trouble until the train stalled near High, except at Paris, where they found a leak in the train line between the third and fourth cars from the caboose, caused by the hose pulling apart, which was remedied by putting in a dummy hose. This was the only time that the train line was broken after leaving Clarksville until it was cut out to double near High. When the train stalled the air gauge in the caboose registered 70 pounds, at that time he (Burton) told Flagman Quinn to "tie down the hand end and protect it with flag" and he then got off and went up toward the locomotive to cut the train. When he left, Flagman Quinn was still in the caboose; on his way up he claims he stopped and applied two hand brakes on the cars. The train stopped about 11.35 p.m. Ten or fifteen minutes later, he uncoupled between the 11th and 12th cars from the engine, it being un-

necessary to back up to get the slack, and as he uncoupled he opened the angle cock on the head end of the rear portion of the train, which gave him the usual response. He gave the proceed signal and accompanied the forward portion of the train to Petty where it was placed on the siding coupling to two cars already there. The locomotive then started to return for the remainder of the train, as (Burton) riding on the rear of the tender. On reaching the point where the rear of the train had been left, he discovered that it was not there. The locomotive backing up slowly until it came upon the rear portion of the train at about 12.30 a.m.

He further stated that when he left the caboose he knew Flagman Quinn had already set one brake; he expected him to set sufficient brakes to hold the cars, then go back and flag; he knew that extra 330 was following, but under the circumstances did not consider it necessary for the flagman to go back the required distance of a mile and a quarter. When he departed with the forward portion of the train he knew that at least three brakes had been set on the rear portion. In his opinion if the hand brakes on four or five of the cars had been set it would have been sufficient to hold them. He considers it was his duty to know personally that the rear of his train was properly secured and protected. It is his belief that the brakes on the rear portion of the train were released by some unknown person or from some unknown cause. After the accident he did not make an examination of the hand brakes or look to see if they had been set.

Flagman Quinn of extra 295 stated that approaching High the train gradually came to a stop; as it did so he went out on the platform and set the brakes on the head end of the caboose, the conductor instructing him as he left to look out for extra 330. After setting the caboose brake he continued toward the head end of the train setting brakes as he went with his brake stick, until he had set the brakes on six cars in addition to the caboose. There were two brakes near the rear of the train that he could not set on account of the pawls missing. He then saw extra 330 approaching in the distance and started back to flag them. He reached a point about one quarter of a mile from the rear of the train when extra 330 overtook him. He stopped the train and told the engine-man that they were doubling. He then returned to the rear portion of his train with the intention of placing his red light on the leading car as a marker. He had reached the forward high car when the cars started to move backward; he together with one of the show men that was with him immediately got on the cars and set the brake but without avail, he then signalled extra 330 with his lantern to back up. He remained on the cars until just before the collision occurred. He also stated that in setting the brakes he did not find any of the brakes already applied; he set them as tight as he could with a brake stick and the brakes appeared to hold all right. He

thinks that about thirty minutes elapsed between the time the train stopped and the time the cars started to move backward. It is his opinion that half the number of brakes should have been sufficient to hold the cars. He did not look over the equipment after the accident to ascertain if any of the brakes were set.

Engineman Voyles stated that as far as he knew the air brakes were not tested before leaving Clarksville, and that it was not customary to make a terminal test before leaving the initial station. On this trip the brakes seemed to be effective, but a little slow in acting and not quite as good as ordinary. When the train stopped at High he did not make any application of the brakes; his gauge registered 70 pounds train line pressure and 90 pounds main reservoir pressure; after coming to a stop he received a signal to ease back, he did this then got a signal to go ahead and started his engine and took the forward part of the train to Petty.

Engineman Hayes stated that as soon as he discovered the rear of extra 295 coming toward his train he tried to back his train up but owing to heavy train and bad rail he was unable to get it out of the way. He estimates the detached portion of extra 295 to have been running from 20 to 25 miles per hour at the time of the collision.

Fireman Guthrie of extra 330 stated that after the accident he examined some of the cars of extra 295. He noticed that the chains were tight on the brakes of the two cars next ahead of the caboose. Flagman Quinn told him that he had set the brakes but that they would not hold.

Roadmaster Bell stated that he was riding the engine of extra 295 because he had ridden those trains before and knew that the equipment was bad and he wanted to be sure that the train ran carefully over soft places in the track. Upon arrival at the scene of the accident he asked Flagman Quinn if he had cut loose. Flagman Quinn replied: "The first thing I noticed was that the rear portion was moving. I got on, the first brake I tried to set would not work, I then tried and set the brakes on the rear of the manager's car which was next to the caboose, after that I got on top of the train and gave the back-up signal." Roadmaster Bell also stated that some one whom he supposed to be the manager of the show told him that they had aboard some of the former show employees who had been discharged at Clarksville and that they were causing them considerable trouble, and that they could not get rid of them.

Wrecking Foreman Williams stated that subsequent to the accident and before the cars had been moved he made an examination of the five rear cars of extra 295. All of the hand brakes except two had been so badly damaged that it was

impossible to tell whether they had been set before the accident. The two brakes that remained undamaged bore no evidence of having been set, neither did the brakes on the caboose. An examination of the entire equipment of this train subsequent to the accident disclosed that the brakestaff, brakewheel, ratchet, pawl and top brake rest were missing on the 4th, 6th, 7th, 8th, 9th, 10th and 15th cars in the train. From his experience Foreman Williams does not believe that if seven brakes had been properly set they could have been released by the impact of the collision although this might have been possible as far as the brake on the caboose was concerned. He stated that if he had inspected these cars when they were received from a connecting line, he would not have accepted them until repairs had been made.

Mr. Allen and Mr. Holstein, managers for the shows were riding in the rear of the business car next ahead of the caboose and remained there from the time the train stopped until the rear portion of the train started backward, and neither of them saw or heard any one set the brake on this car, although they were in a position to observe it if it had been done.

Trainmaster Kilway who was riding extra 295 in a supervisory capacity stated that the circus train was received from the Texas Midland Railroad at Paris, Texas, on September 11, and moved to Clarksville September 13th, and remained there until September 19th. The cars were placed on various tracks at Clarksville but were switched and assembled by Conductor Burton and crew before departure. About half way up the hill at High he felt a continuous kicking or jerking of the train for a few moments which led him to believe that the train line was locking; shortly after this the train gradually came to a stop. He remained on the locomotive while it was taking the front portion of the train to Petty. Upon returning to the rear portion of the train after the collision had occurred, he met Conductor Burton and asked him if he had set any brakes to which Burton replied "No." Trainmaster Kilway also stated that in his opinion every safeguard was thrown around the train. He instructed the conductor and enginemen about handling the train carefully. He understood that the air brakes were tested before leaving Clarksville; he walked over the entire train but does not recall looking at the hand brakes on the flat cars. He also stated that the car inspector at Paris told him that the equipment was in accordance with the N.C.B. rules except that it was decayed.

Car Foreman Rohatch located at Paris, stated that he did not make any rigid inspection of the equipment involved before it left Paris on September 12th, but that he just glanced over the cars. He was unable to state whether or not the equipment had been inspected when it was received from the connecting line.

Wrecking Helper Groom stated that he assisted in making an inspection and test subsequent to the accident of the first nine cars of the detached portion of extra 295. Of those inspected only four had effective hand brakes.

On September 22, a test was made of the condition of the air brakes on the fourteen cars forming the detached portion of the train with the following results:

Initial	Number Piston Travel.			Time remained set.	
GSWE Flat	84	5	in.	15	minutes
GSWE Flat	25	Cut out and not applied.			-
TWA Flat	67	10½	in.	16	"
GSWE Flat	26	12	in.	17	"
GSWE Bag-coach	32	6	in.	17	"
GSWE Horse	21	Did not apply			
CWPX Box	58	5	in.	13	"
TWA Sleeper	305	10½	in.	18	"
TWA Sleeper	308	9½	in.	18	"
TWA Sleeper	46	Broken pipe - no test.			-
GSWE Sleeper	20	9	in.	6	"
TWA Diner	20	3	in.	3	"
GSWE Sleeper	39	9½	in.	27	"
GSWE Business	40	6	in.	18	"

At the scene of the accident there was a rumor that the brakes might have been released by former employees of the show company, who had been discharged at Clarksville, but a thorough investigation failed to discover that any such employees were known to be in the vicinity of the accident, or that there was any foundation whatever for such a rumor.

It is self-evident that the rear portion of this train could not have started by force of gravity with seven hand brakes properly applied. An examination of the equipment subsequent to the accident does not disclose evidence that the brakes had been set.

There is nothing to substantiate the statement of Flagman Quinn that he set seven hand brakes, while on the other hand there is evidence to contradict it. His statement to Roadmaster Bell and the fact that Mr. Allen and Mr. Holstein were of the belief that no brakes were set on the business car are to this effect.

This accident was caused by the rear portion of extra 295 being left on a descending grade with insufficient hand brakes set and when the air brakes leaked off the cars of their own weight started down the descending grade. For this failure

Flagman Quinn is responsible.

Conductor Burton also shares equally in this responsibility. Transportation Rule 105 reads:

"Both conductors and enginemen are responsible for the safety of their trains and under conditions not provided for by the rules must take every precaution for their protection."

To comply with this rule Conductor Burton should have known that sufficient hand brakes were set on the rear portion of the train to hold it, and he being the only man on the rear of the train, except the flagman, whose duty it was to go back and flag, should have set sufficient brakes himself. Instead of doing this, he left the rear of the train with Flagman Quinn still in the caboose with only one hand brake set and with two important duties to perform which required his presence in two different places immediately, namely, back protecting the rear of the train with a red light and on the rear of the train setting the hand brakes. His statement that he set two hand brakes on his way to the front of the train not only is not substantiated by other evidence but is contradicted by himself in his statement to Trainmaster Kilway shortly after the accident. Neither is his statement concerning the testing of the air brakes before leaving Clarksville substantiated as Engineman Voyles stated that if a test was made he knew nothing about it.

The operating officials knew that trains of this character were apt to be in poor condition, and they should have taken unusual steps to have a rigid inspection and repairs made to place it in the best condition possible. Yet it appears that notwithstanding this knowledge even ordinary precautions were not taken.

Two officials were riding this train for supervisory purposes but it appears that both were riding in the engine. It would seem to be better practice in this instance for Trainmaster Kilway to have been at the rear of the train inasmuch as the roadmaster was at the forward end. It cannot be conceded as claimed by Trainmaster Kilway that every protection was thrown around the movement of this train when it left Clarksville in the condition in which it is shown to have been and without a test of the brakes having been made.

On July 23, 1920, there was an accident on this railroad at Orphans Home, Texas, resulting in loss of life, personal injuries and serious property damage which was caused by the rear of a train being left on a siding with an insufficient number of hand brakes being set. As a result of this accident the following circular was issued:

TEXAS & PACIFIC RAILWAY

J. L. Lancaster and Charles L. Wallace, Receivers.

Ft. Worth, Texas, July 29, 1920.

SUPERINTENDENT'S CIRCULAR NO. 814.

To:

Train, Engine and Yard Men.

On recent date a disastrous accident occurred, which was brought about account violation of the rules and disregard of practical manner of handling in keeping with good railroading.

A freight train was standing on passing track with the public road crossing cut, awaiting passing of a passenger train. Immediately when passenger train was seen approaching an attempt was made to couple crossing preparatory to departing when passenger train cleared. Coupling failed to make, air had leaked off rear portion of train standing on passing track, crew had failed to secure this rear portion by setting hand brake; they further failed to protect this movement by having member of crew on rear portion of train in order to prevent running out. For this reason rear end ran out, colliding with engine of passenger train, which was not scheduled to stop at this particular point, resulting in death of one employee and heavy damage in dollars and cents to railway company.

These are conditions that can and must be prevented. This accident is purely the result of men failure and cannot be chargeable to failure of machinery, apparatus or otherwise. These occurrences should be studied and serve as a lesson to all who are engaged and charged with the responsibility of the operation of trains.

Let's all lend our best personal co-operation along these lines in order that we may not become involved in a like occurrence. We will appreciate your very best efforts along these lines we assure you.

J. W. Knightlinger,

Superintendent.

Both Conductor Burton and Flagman Quinn admit that they had read the above circular but apparently neither paid any attention to it.

Investigation of this accident discloses a general

laxity in operating practices. It appears that this train was received from a connecting line at Paris in a defective condition, several cars being without hand brakes in working order; it remained at Clarksville a week and no repairs made. When the train left Clarksville the conductor and trainmaster were in ignorance as to the condition of the air or hand brakes. The caboose was short part of its flagging equipment and no attempt was made to secure it. The conductor left the caboose assigning other duties to the flagman than protecting the rear of the train, notwithstanding the fact that he knew that there was another train following.

The bad practices disclosed by this investigation should be corrected as promptly as possible.

All of the employes involved in this accident were experienced railroad men.

At the time of the accident the crew of extra 295 had been on duty fourteen hours after having had more than 12 hours off duty. The crew of extra 320 had been on duty 10 hours and 30 minutes prior to which they were off duty 8 hours and 30 minutes.