

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
ANN ARBOR RAILROAD NEAR POMONA, MICH., ON JULY 4, 1929.

November 2, 1929

To the Commission.

On July 4, 1929, there was a derailment of a freight train on the Ann Arbor Railroad near Pomona, Mich., resulting in the death of two employees and the injury of one employee.

Location and method of operation

This accident occurred on the Third Division, which extends between Selma and Frankfort, Mich., a distance of 64.17 miles, this is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. The accident occurred at a point about 1,900 feet east of the station at Pomona, in a cut, near its eastern end and about 375 feet west of bridge No. 264-6, a concrete box-culvert; approaching this point from either direction the track is tangent for a considerable distance, while the grade in the immediate vicinity of the point of accident is 0.99 per cent descending for westbound trains. The track is laid with 85-pound sawn rails, approximately 31 feet in length, with an average of about 18 ties to the rail-length, tie-plated, double-spiked, and ballasted with gravel to a depth of about 10 inches; the track is well maintained.

The concrete box-culvert is 4' x 4' x 34' and at the point where it goes under the track there is a fill about 4 feet in height; this fill extends westward from the culvert for a distance of about 200 feet, to the east end of the cut in which the derailment occurred. The cut is about 2,000 feet in length and about 20 feet in width; the maximum height of its north bank is 22 feet, while that of its south bank is 14 feet. The concrete box-culvert is intended to carry away under the track toward the south any excess water from a small ditch that parallels the main track on the north for about one mile east of the culvert, the ditch is about 2 feet

wide and 6 inches deep and the flow of water is from east to west until the immediate vicinity of the culvert is reached, at which point the water is diverted to the left or south under the track and thence away toward the southwest. There are also ditches on each side of the main track through the entire length of the cut, and there is a dry run which comes down from the north at a point opposite the culvert, merging with the ditch on the north side of the track.

During the night of the accident there had been a heavy downpour of rain, causing roads to be washed out and doing much damage. The records of the weather bureau at Benzonia, Mich., about 16 miles from Pomona, showed that 1.75 inches of rain fell at that point between 7 and 9 p.m., July 3rd.

The weather was cloudy at the time of the accident, which occurred at about 1.35 a.m., July 4th.

Description

Westbound freight train extra 185 consisted of 49 cars and a caboose, hauled by engine 185, and was in charge of Conductor Pate and Engineman Carvin. This train left Mesick, 10.91 miles east of Pomona and the last open office, at 12.34 a.m., and was derailed by a washout near Pomona while traveling at a speed estimated to have been between 25 and 30 miles per hour.

Engine 185 and its tender, coupled, came to rest on their right sides, north of and parallel with the track, at a point about 550 feet west of the concrete box-culvert. The first 14 cars were derailed and piled up in a short space behind the tender, but the fifteenth car was not derailed and came to a stop on the track with its forward end 340 feet west of the culvert. The following six cars, however, were also derailed and piled up in a mass on the north side of the track, but the remaining portion of the train came to a stop intact on the rails, with the forward end of the twenty-second car at a point 150 feet west of the culvert. The employees killed were the engineman and fireman, while the employee injured was a brakeman.

Summary of evidence.

Conductor Pate stated that at Mesick a message was received to look out for washed track in cuts and low places, due to the heavy rain, he said he received

this message at the rear end after the train had gotten under way and that the original copy of the message was delivered to the head end. Conductor Pate was riding in the cupola of the caboose, on the right side, between Mesick and the point of accident, and the first intimation he had of anything wrong was the shock caused by the slack running in, which he said was not severe. He estimated the speed of the train to have been not more than 30 miles per hour at the time of the accident. Conductor Pate said that the headlight was burning properly on leaving Mesick, and that the air brakes had been tested and worked properly. Immediately after the accident he proceeded along the north side of the train toward the head end and on reaching a point in the immediate vicinity of where the last of the derailed cars came to rest he noticed running water, but did not pay particular attention to this condition. Then he crossed over to the south side of the train and proceeded toward the engine, rendering what assistance he could. While so engaged he went to a point ahead of the engine and then started eastward on the north side of the track and went in to water and mud up to his knees. Conductor Pate afterwards proceeded westward toward Pomona station, making no further investigation as to the cause of the accident, but on his way he noticed that the track had washed out under the ends of the ties on the north side of the rail at four or five different places, while just east of the station the gravel had been washed out from under the north rail to the bottoms of the ties, with the north rail suspended at two or three different locations. Brakeman Sudman immediately went back to flag, on his way back he noticed where the water had washed to within 1 foot of the ties at one point and said that he could also hear water running from the north side of the track.

Section Foreman Berryhill, whose section includes that portion of track where the accident occurred, stated that he last inspected the box-culvert three days prior to the accident and at that time the water was running freely and the entire area of the culvert was open and capable of carrying water. He was at Copemish, about 3 miles west of Pomona, on the night of the accident, and the only rain of which he had any knowledge fell between 8 and 9 p.m., and was not enough to warrant patrolling the track. On arrival at the scene of the accident about 1½ hours after its occurrence he inspected the culvert and said that it was not obstructed in any way; the north and south banks of the

cut were in good condition, but the water had filled up the ditches and run over the top. At the time of his inspection, however, there was no water on the north side of the track through the cut. No large body of water had backed up in the level low land located north of the tracks and mostly east of the culvert, although there was some water in that area. Between the culvert and the station at Pomona the road-bed had been washed out under the track at several points. In his opinion the accident was caused by a washout, due to water backing up in the flats, north and east of the box-culvert, and then overflowing through the cut west of the culvert, washing out the track in the cut.

Section Foreman Berryhill further stated that he had been section foreman at this point for three years, and during this period he had had trouble at this point on one other occasion, when snow was melting, but no damage to the track resulted. Track Supervisor Pickering, who had formerly been in charge of this section as foreman, said he had had a washout at this point in the spring of 1913 or 1914, due to an excessive flow of water as a result of rain and melting snow.

Supt. of Bridges and Buildings Turnbull said that when he inspected the culvert in the fall of 1928 he found it filled in at the bottom so that the opening was only $2\frac{1}{2}$ feet in height. Track Supervisor Pickering, however, said he last inspected the culvert in May, 1929, and at that time it was unobstructed and water was flowing freely, he next examined it on the day of the accident and again found it to be free of obstructions.

Statements of several residents of Pomona and the immediate vicinity were to the effect that the rainfall on the night of July 3 was one of the heaviest ever experienced in this locality.

The last train to pass over the track at the point where the accident occurred was eastbound freight train extra 184, doubleheaded, which passed that point about three hours prior to the occurrence of the accident. At that time the crew noticed water running freely through the ditch and cut, but not close to the ends of the ties, and after discussing the matter at Mesick, the two enginemen decided conditions did not justify notifying the dispatcher or stopping extra 185 and

telling that crew what they had seen. This crew gave further testimony to the effect that an extremely heavy rain fell before their train left Frankfort on this trip, but that after departing therefrom, at 8.55 p.m., July 3rd, no rain of any consequence was encountered, although in the vicinity of the point of accident there was so much water that some of them heard it roaring above the noise of the train.

Inspection of the track after the accident disclosed that starting at a point about 240 feet west of the concrete box-culvert, in the cut near its extreme eastern end, there was a washout 25 feet in length and 4 feet deep that extended in as far as the center of the track, on its north side; between this point and where the next washout occurred, which was a similar washout about 140 feet in length, the track remained intact for a distance of 75 feet and one detached freight car stood on the rails of this piece of track. Another short piece of track, about 30 feet in length, remained intact west of the long washout, but at the west end of this piece of track, at which point the engine and tender came to rest, the current westward through the cut had washed entirely underneath the track to the south side thereof. From this point to the station at Pomona, located just beyond the west end of the cut, the ballast at the ends of the ties on the north side, showed evidence of having been cut away by water. In front of the station the roadbed was washed out a distance of about 60 feet and the north rail was suspended, while an earth embankment at the west end of the station was also washed out, indicating that the water had rushed against the embankment and was then diverted toward the north, spending its force over the adjoining fields. No wheel marks or other marks appeared on the ties on those sections of track that remained intact, nor on the ties east of where the first washed-out track occurred. Apparently the engine derailed just east of where it came to rest, as the indications were that it did not travel more than a few feet after it struck the north bank of the cut. There was no indication that the bank on either side of the track had sloughed off and filled the ditches in the cut.

Conclusions

This accident was caused by a washout.

The evidence showed that on the night of the accident there had been a very heavy downpour of rain within a radius of several miles of the point of accident and it appeared that the volume of water delivered to the culvert from the north side was so large that it could not be handled, with the result that the water backed up in the low land north of the track and mostly east of the culvert, eventually flowing over the top of, and breaking through, a levee built at this point to hold back any accumulation of water, resulting in the water overflowing through the cut and in the roadbed being washed out at various points therein.

The washout causing this accident is the second time there has been sufficient trouble at this point to interfere with the safe movement of traffic. Steps should be taken to see that it does not occur again, either by enlarging the culvert, or by providing such other means for controlling flood waters as may appear advisable to the engineering department.

All of the employees involved were experienced men and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.