

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN THE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
GREAT NORTHERN RAILWAY AT SUNBURST, MONT., ON
FEBRUARY 20, 1929.

May 27, 1929.

To the Commission:

On February 20, 1929, there was a derailment of a passenger train on the Great Northern Railway at Sunburst, Mont., which resulted in the death of one employee and the injury of two employees. This investigation was conducted in conjunction with a representative of the Board of Railroad Commissioners of Montana.

Location and method of operation

This accident occurred on that part of the Fourth Sub-division of the Butte Division which extends between Virgen and Sweet Grass, Mont., a distance of 36.25 miles, and is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. The general direction of the track is north and south, but the time-table direction is east and west, and this latter direction is used in this report. The accident occurred at a point 1,424 feet east of the station at Sunburst and 70 feet east of the east switch of one of the industry tracks. Approaching the point of accident from the east the track is tangent for more than 1 mile; the grade is 0.15 per cent ascending at the point of accident. The industry track parallels the main track on the north, and a No. 9 turnout is used. The main track was laid with used rails, 30 feet in length, in 1927, with 18 treated fir and tanarack ties to the rail-length, tie-plated and single-spiked; it is ballasted with from 4 to 6 inches of gravel or about 6 inches of cinders, and is maintained in moderately good condition.

The weather was clear at the time of the accident, which occurred at 1.15 p.m.

Description

Westbound passenger train No. 239 consisted of one baggage car, one smoking car, one coach and one parlor car, in the order named, all of wooden construction, hauled by engine 1042, and was in charge of Conductor Burke and Engineer Reardon. This train departed from Kevin, the last open office, 10.42 miles east of Sunburst, at 12.54 p.m., 49 minutes late, and was derailed at

Sunburst while traveling at a speed estimated to have been between 20 and 25 miles per hour.

The engine turned over on its left side and came to rest directly across the industry track at a point about 230 feet west of the first point of derailment. The engine truck was detached and came to rest just north of the front of the engine; the tender remained upright, the front end being close to the driving wheels and the rear end across the north rail of the main track. The first car and the forward truck of the second car were derailed. None of the other equipment was derailed or damaged. The employee killed was the fireman.

Summary of evidence

Engineman Reardon stated that approaching the point of accident he made a light application of the air brakes to ease the train over a rough spot and when near the water tank, which is located about 1,600 feet east of the first point of derailment, he encountered a snow drift. After passing through this snow the train was approaching the station when it struck a little snow and he felt the engine raise up; realizing that something was wrong he closed the throttle and applied the air brakes in emergency. He estimated the speed at the time of the accident to have been 20 miles per hour, and in his opinion the derailment was caused by hard snow in the flangeway.

Traveling Engineer Stone, who was riding on the engine at the time of the accident, stated that when the engine hit the snow near the water tank there was some shock but it did not appear to reduce the speed a great deal. At the time of the derailment he did not notice any snow flying and the engine traveled only a short distance before it turned over. After the accident Mr. Stone made an examination of the track and found the first mark of derailment to be at the No. 3 wheel of the second car on the north side of the track; this was close to the switch, however, and the mark consisted only of a light mark in the snow beside the rail. There was also a slight drift east of this point, and the snow was solid enough to support the weight of a man. Upon inspecting the engine he found the throttle closed, the brake valve in the emergency position and the reverse lever in the forward position. In his opinion the operation of trains back and forth had formed a rut in the snow, which was above the rails, and new snow, which seemed to be very heavy, had drifted in and was sufficient to prevent the engine truck wheels from staying on the rails.

The testimony of Conductor Burke disclosed nothing additional of importance. Head Brakeman Ford and Flagman

Helvin stated that it was not customary to have a great deal of snow at that particular point, although they often encountered some at the station, in which event the train usually pulled ahead beyond the station and then backed up.

Master Carpenter Johnson, who was riding as a passenger at the time of the accident, stated that after the accident he examined the track and found the switch point on the north side in perfect condition, but the point on the opposite side had a piece broken out of the end of it. This point appeared to have been struck by something. The switch was locked. He stated that at a point about 64 feet east of the switch there were marks that indicated to him that the engine-truck wheels had left the rails at that point, although there were no marks to show that the flange of the wheel had climbed the rail. Mr. Johnson was of the opinion that the derailment was caused by the hard-packed snow. He stated that the snow was very heavy and there was very little dirt in it. He cleaned away the snow along the side of the rail and found a thin sheet of ice on top of the ties.

District Roadmaster Eastman, who has charge of the section of track upon which the accident occurred, stated that he had last been over this territory on February 15 and had found no great amount of snow at that time. On the day following the accident he operated a snow-dozer at Sunburst and found a snow drift about 200 feet long west of the water tank, this drift was composed of some dirt and very heavy snow, about 2 or 3 feet in depth. At the point of derailment there was another drift about 10 or 12 inches deep with more dirt in it than in the first drift. On the night of the 20th the weather was comparatively calm and he thought the conditions on the following day were just about the same as they were on the day of the accident. Mr. Eastman also stated that the section gang located at Sweet Grass has charge of the track at Sunburst and is expected to cover this territory every day, a distance of approximately 11 miles. In previous years trouble had been experienced by snow drifting over the industry track at Sunburst, but never on the main track. He stated that they have a snow fence near the water tank, where they get as much snow as anywhere, and they also have a snow fence near the track at the point of the accident, which was full of snow at that time.

Section Foreman Poulos, who has been employed as section foreman at Sweet Grass for the past four months, stated that he had never found it necessary to clean out very many drifts at Sunburst as there was usually very little snow there. He also stated that he was unable to go to Sunburst on the motor car on the day of the accident, due to the snow on the track, but took the local train due at Sunburst at 2.05 p.m.

The Commission's inspectors were unable to make an

examination of the track in the vicinity of the point of accident until about 48 hours after its occurrence, at which time repairs to the track had been completed. There were many marks and cuts on the ties but there was nothing about them which was of assistance in determining when or how they were made. The lost or south switch point was battered, and a piece broken from it which was about 5 inches in length, this was a new break, but might have been made when the engine was pulled from the rail by the engine truck. This examination of the track did not disclose any track conditions which might have contributed to the occurrence of the accident, although it was noted that the gauge was tight and the elevation was uneven.

Conclusions

This accident apparently was caused by a drift of heavy snow on the track.

There was evidence that east of the point of derailment the snow was 10 or 12 inches deep, packed very hard and mixed with some dirt, and apparently none of the witnesses made any detailed examination of the track, accepting the presence of marks in the snow east of the switch as indicating the point of derailment and reaching the conclusion that the accident was due to hard-packed snow. Subsequent investigation did not lead to any different conclusion.

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.