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IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON  
THE GREAT NORTHERN RAILWAY NEAR CORREA, WASH.,  
ON JANUARY 22, 1916.

On January 22, 1916, there was a derailment of a passenger train on the Great Northern Railway near Correa, Wash., which resulted in the death of eight passengers, and the injury of eighteen passengers and four employees. After investigation of this accident the Chief of the Division of Safety reports as follows:

Westbound passenger train No. 25 consisted of one combination mail and baggage car, one smoking car, both of steel underframe construction, one coach of all-steel construction, one dining car, one standard sleeping car, and one observation car, the latter three being of wooden construction. This train was hauled by locomotive 3621 and was in charge of Conductor Harrington and Enginemen Zinke. Train No. 25, en route from Spokane to Seattle, Wash., left Leavenworth, Wash., 40 miles east of the point of accident, at 2:30 a.m., 15 minutes late, was delayed slightly more than two hours at Gaynor, 25 miles west of Leavenworth, on account of a broken steam pipe and passed Habro, the last station before the point of accident, at 7:03 a.m., 2 hours and 43 minutes late. At 7:08 a.m., about 1-1/3 miles west of Habro, this train ran into a snowslide 15 feet deep and 100 feet wide, derailing the front track of the engine. At 8:20 a.m., while standing at this location awaiting assistance, train No. 25 was struck by a snowslide 25 feet deep and 260 feet wide.

This accident occurred on the First District of the

Cascade Division of the Great Northern Railway, this district extending from Leavenworth, Wash., at the foot of the eastern slope of the Cascade Mountains, to Everett Junction, Wash., west of these mountains, a distance of 109.5 miles. Trains are operated by the electric train staff block system between Leavenworth and Skykomish, a distance of 87 miles; train orders can also be transmitted by telephone. The ascending grade of the mountain range from Leavenworth to Cascade Tunnel, a distance of 32.3 miles, is 2.7 per cent. Between Cascade Tunnel and Tye, a distance of 3.6 miles, the mountain is pierced by a tunnel three miles in length, the altitude at this place being 5,114 feet. Westward from Tye the grade is 2.2 per cent descending to Skykomish, at the foot of the western slope.

The line of this railway through these mountains is single-track. Beginning at Tye, the track is laid on the south slope of a mountain in a southwesterly direction to Embro, 3.8 miles from Tye, continuing in this direction beyond Embro a distance of nearly two miles to Martin Creek, just beyond which it passes through a horseshoe-shaped tunnel, 1,512 feet in length, leading to the left. It then recrosses Martin Creek, and extends in an easterly direction on the same side of the same mountain, but on a lower level, passing Corea about one-half mile east of the tunnel and continuing to Scenic, a station three miles east of Corea. At Scenic the track follows another horseshoe curve to the right, and then extends in a westerly direction on the northern slope of another mountain toward Skykomish.

This accident occurred about one and one-third miles

west of Embro on the upper level of track just described, which is about 250 feet farther up on the mountainside than the lower level and about 100 feet higher in elevation. The track at the point of derailment is tangent.

The main part of the snowslide struck the coach and dining car of train No. 25, hurling both down the mountainside. The coach broke loose from the dining car, turned over on its left side and came to rest 250 feet below, with one end of the car on the lower level of track near the switch just west of Corea, being almost completely buried in the snow. The window panes were all broken; the seats were seriously damaged; at one end of the car the vestibule was forced in, and the steps and end of the roof were torn off. The body of the car, however, was not forced out of line, as the doors could be opened and closed.

The dining car turned over and came to rest on its roof about 100 feet below. The fire in the broiler was scattered about, igniting and totally consuming the car. The sleeping car was either derailed by the east end of the snow slide or was pulled from the track by the dining car. This car sustained considerable damage but was not thrown down the mountainside, coming to rest about ten feet from the track. The rest of the train remained on the track, the observation car being just clear of a snowshed.

Owing to peculiar climatic conditions due to the southern exposure of that side of the mountain, snowslides occur very frequently between Tye and Oceanic. Between March 1, 1910, and the date of this accident, eighty snowslides occurred between these two places, twenty-four of which were in the vicinity of Corea.

As a protective measure against these slides this railway has erected numerous snowsheds over their tracks, some being entirely of wooden construction and some having concrete rear walls and foundations. This latter type of construction was begun in 1915. The distance between Tye and Scenic is 9.3 miles, or 49,104 feet, of which distance 25,650 feet or 52 per cent is protected by snowsheds. During the investigation of this accident, however, it was disclosed that when snowslides came in contact with the wooden snowsheds they frequently demolished them, as much as 450 feet of one having been carried away by a slide.

This accident was caused by train No. 25 being struck by a snowslide. The mountain slope on which this snowslide occurred has a southern exposure and is therefore subject to the effects of so-called "chinooks," which are warm, descending, southerly winds that cause the temperature to rise very rapidly, as a result of which the heavy snows become loosened from the mountain sides. Only the slightest tremor or external force is then necessary to start an avalanche.

The effects of past snowslides in the vicinity of this accident are evidence of the inadequacy of wooden snowsheds, and it is understood that the railway is planning large expenditures for the erection of concrete snowsheds in the Cascade Mountains to provide greater protection for lives and property against the danger of avalanches which frequently occur in this region.