

So, how tough was it to build a railroad?

Shortly after the rails of the Everett and Monte Cristo Railway reached their destination in the gold fields of Monte Cristo, Chief Engineer S. B. Fisher wrote an article covering the details of the construction. That article was published in the Oct 5, 1893 edition of Engineering News, a copy of which recently surfaced on eBay, and provided details that have not been disclosed in earlier books describing the railway. Highlights from that article will give you a picture of the challenges faced by the intrepid folks opening the frontier in the 1890s.

Fisher first provided his perception of the weather and the natural geography he faced:

“Owing to the nature of the country and the habits of the people, railway building in the Puget Sound country and the Cascade Mountains is generally slow, difficult, and expensive. It is doubtful whether any other quarter of the habitable globe can exceed the section of country lying between the Cascade mountains and the Coast Range and north of the Columbia River, in Washington, known as the Puget Sound country, in the variety of its weather. The annual rainfall is from 6- ins. To 120 ins. Everything which one would expect to meet in a year is crowded into a day – clouds, high winds, snow, sunshine, sleet, “chinook”, rain, mist, cold. Every describable and indescribable kind of weather comes and goes with a rapidity that baffles record. On the slope of the Cascades the country is rude, savage and almost wholly undeveloped. The streams course rapidly down the mountain slopes, but in the lower parts of their courses are more quiet and can be navigated by small craft during a large part of the year. The principal streams are the Puyallup, Black, Snohomish, Pilchuck, Stillaguamish, Sauk and Skagit.”

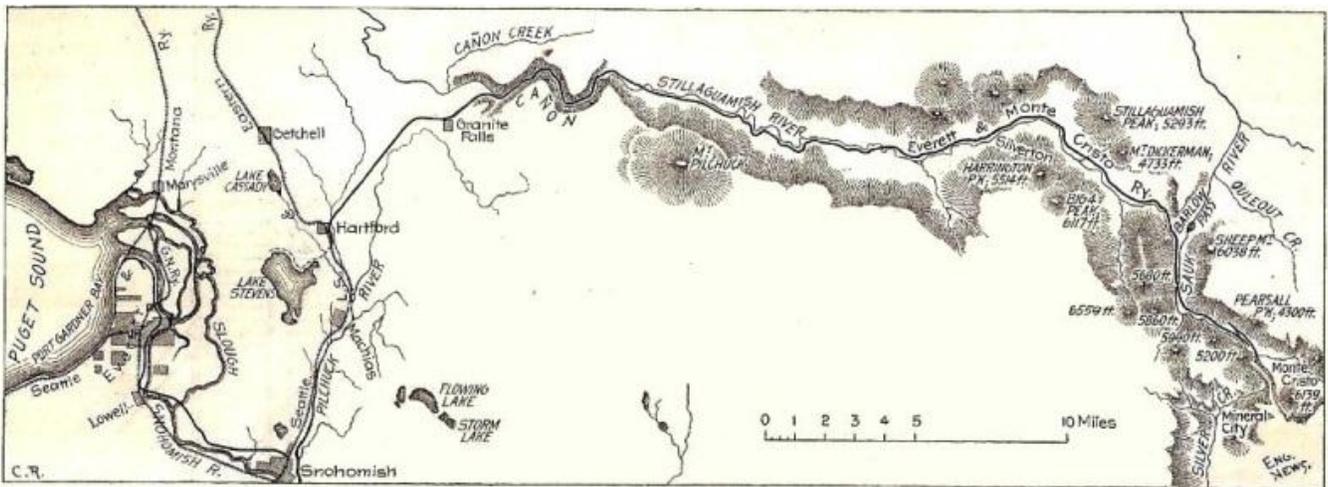


FIG. 1. MAP OF THE EVERETT & MONTE CRISTO RY., WASHINGTON. S. B. Fisher, Chief Engineer.

“The whole country is covered with timber, principally spruce, fir, hemlock, cedar, cottonwood and alder, and there is an infinite number of prostrate trunks and a dense underbrush. From 10 ft. to 100 ft. is the ordinary range of vision, and the rate of travel is about ½ mile per hour, and about the hardest traveling a man ever attempted. Fortunately, large animal life is scarce, and the bugs and flies are generally without ferocity.”

The railroad started in Everett and went upstream along the Snohomish River to Snohomish, and from there made use of eight miles of track of the Seattle, Lake Shore & Eastern Ry to reach Hartford (today, “Lake Stevens”). Construction from there followed the Pilchuck Valley to Granite Falls, which the railroad reached in Oct 1892. The challenging part was yet to come – building through what we call Robe Canyon, then climbing more steeply along the Stillaguamish to Barlow Pass, and finally up the Sauk River to Monte Cristo.

Fisher described the effort: "Late in 1891 a preliminary survey was made, hurried through by the falling snows and approaching winter. Location was begun Feb 20, 1892, under the direction of J. Q. Barlow. One party was started at the foot and another at the head of the canyon of the Stillaguamish River, about six miles apart. It took them six weeks of hard work to connect the location at a middle point, thus averaging ½ mile per week per party. Some days on 100 ft. were located [*remember he's saying "located", not "constructed"*]. In some places the men hung on by ropes, at others by the underbrush, and some parts of the line were inaccessible, points on them being located by triangulation. The location in the canyon being completed, it was continued toward Monte Cristo, following the retreating snow, which it overtook in May. The party spent about three weeks shoveling snow on the trail. The snow line in winter comes down usually to an elevation of about 600 ft. and retreats to about 5,000 ft. in summer. The snow in this region never freezes. It is loose for a day or so after falling, but soon becomes compacted. The weather is rarely cold enough to make ice. Location was completed to Monte Cristo during July, 1892." (See next page for overall E&MC track profile)

Next: Blasting, landslides, and tunnels.

Track Profile of the E&MC Ry taken from Oct 5, 1893 Engineering News

Notes:

Steepest grades (3%) through Robe Canyon and from the Sauk River into Monte Cristo
Tunnel #7 (about nine miles east of Robe Canyon mouth) was never completed
Switchback (about one mile west of Monte Cristo) gained about 100' in elevation

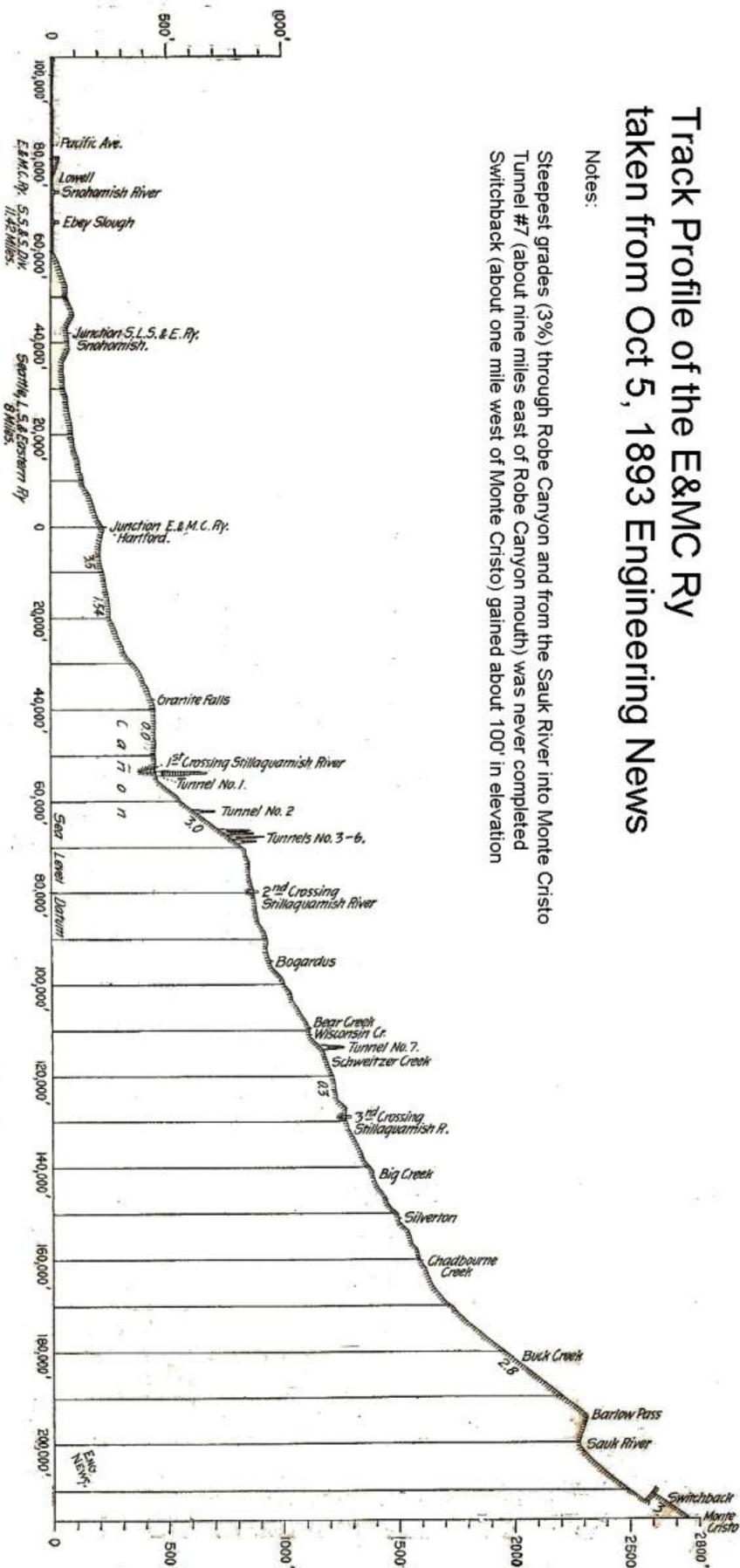


FIG. 2. GENERAL PROFILE OF THE EVERETT & MONTE CRISTO RY.