

VALUATION SECTION MONTANA 7.

Valuation Section Montana 7 covers the lines known as the Roy and Winifred Branches, both lying wholly in Fergus County, Montana. The Roy Branch extends in a general north-easterly direction from Lewistown to Roy, and comprises about 43 miles of railroad. The Winifred Branch leaves the Roy Branch at Roy Junction and extends about 24 miles in a general north-westerly direction to its terminus at Winifred. This latter line follows the Dog Creek Valley and is sometimes designated as the Dog Creek Line. The former line is usually known as the Roy Line.

The first surveys for these lines were made in 1910 when a preliminary and location survey was made to Roy. As will be shown later a short section of the line was immediately constructed following these surveys, and about a six mile section in 1911. In 1912 the final construction was commenced, just previous to which a location was made revising the previous survey to a considerable extent. This work was done in September, 1912.

On September 15th, 1912, surveys were started toward Winifred from Roy Junction. The controlling feature on this survey was the crossing over the divide between Deer and Dog Creeks. Two complete surveys were made at this place, one for a one percent and one for a one and one-half percent gradient. Surveys were completed into Winifred on October 27th, 1912.

Summarizing the surveys for the two lines we find that 90 miles of preliminary and 68 miles of location survey was made for the 43 miles of adopted and constructed line to Roy, and 40 miles of preliminary and 24 miles of location survey made for the Winifred Branch.

The Lewistown-Roy Line follows natural drainage over almost the entire distance. Between Lewistown and Baxter, Burnett Creek is followed. One mile north of Baxter a divide is attained by the use of a maximum one percent gradient. From there the line descends on a one percent gradient to Warm Spring Creek, near Brooks. Leaving Brooks the gradients on the first 4 miles are rolling, thence an ascent along Bull Creek on a maximum 1-2/10 percent gradient is made to Hilger. From Hilger a descent is made along Gumbo and Deer Creeks on a 1-2/10 percent gradient to Armelle Creek. Armelle Creek

is ascended on a 1-5/10 percent gradient to the divide on Mile Thirty-four. From Mile Thirty-four a continuous descent is made to the terminus at Roy, the maximum gradient being 1-5/10 percent. The curvature is mediumly sharp, 8 degrees being the maximum.

On the Winifred Line a 1-5/10 percent gradient is used to attain and descend the divide between Dog Creek and Deer Creek. Heavy side hill development work is used over the divide, thence the line follows the Dog Creek Valley on a maximum gradient of one percent to Winifred.

The first 12 miles from Lewistown was built in 1910-11 and was known as the Kendal Extension, as the Kendal Mines were located about 18 miles north of Lewistown on the east slope of the North Moccasin Mountains. In 1911 the line was extended 5 miles farther to Hilger and in 1912-13 it was extended to Roy, and the Winifred Branch built.

McIntosh Brothers were the general contractors for the 12 miles built in 1910. They sublet the work to Brown, O'Neil & Leahy. The five mile extension to Hilger in 1911, was let to D. J. Burke. In May, 1912, D. J. Burke was awarded the contract covering the construction of a six mile extension north from Hilger. After forces were organized and the work under way, the length of this extension was reduced to 4 miles and an indemnity was paid to the contractor for his additional expense in moving his equipment away from the work without being able to complete it. In September, 1912, D. J. Burke was awarded the contract for completing the line to Roy, also for the grading on the Winifred Branch. The grading into Winifred was completed in October, 1913, and to Roy in December of that same year.

Between Lewistown and Hilger the grading was done with grading machines, dump wagons, and scrapers. Material encountered was usually earth, with the exception that hard pan, shale, loose and solid rock occurred in the deeper cuts. From Hilger north to Armells Creek, on the Roy Line, the material was largely gumbo and was not easy to handle. In the heavier cuts, and especially in the Summit Cut in Mile Thirty-four, gravel intermingled with hard pan, loose and solid rock was encountered. Along Box Elder Creek the material was comparatively easy to handle, hard pan being encountered only occasionally. The work between Hilger and Roy was done with fresno scrapers, grading machines and wagons. At the Summit Cut caterpillar engines were used for hauling the grading machines. A steam shovel was also transported over land to this cut as a matter of precaution, it appearing that the material was not going to be handled satisfactorily by the grading machine. The steam shovel was only used for a short time as the grading machines did better work than was expected. Teams with scrapers and grading machines were used on the Winifred Line with the exception that a steam shovel was used in the heavy cut near Roy Junction. This shovel was brought to the work after the track had been laid north from Hilger.

The bridge and culvert work on the first 12 miles from

Lewistown was done under contract with McIntosh Brothers. From Hilger to Roy, and from Roy Junction to Winifred such structures were built by D. J. Burke under contract. Bridges were all built in accordance with the Railway Company's standard plans. Bridge timber was of Western fir and the piles of cedar.

The culverts were of timber, corrugated iron and cast iron pipe.

All bridge and culvert material was furnished by the Railway Company. The material was hauled by team from Lewistown until the line was completed to Hilger. The material for the Roy Line north of Hilger and for the Winifred Branch was hauled by team from Hilger, where a material yard was established. The construction work on the Lewistown-Great Falls and Lewistown-Grass Range Lines was in progress at this time, and Lewistown was used as a point of supply for all of this construction. Consequently, the material was unloaded at Lewistown, reloaded and shipped to Hilger, where it was unloaded and hauled to the points of use.

Track was laid by hand between Lewistown and Hilger in November, 1911. The track between Hilger and Roy Junction was laid by hand during July, 1913, by Contractor, D. J. Burke. A machine was used between Roy Junction and Armelle, which place was reached December 9th, 1913. Work was delayed here until March 21st, when work was resumed, and track laying was completed into Roy on April 17th, 1914. The work from Armelle to Roy was done by hand. Track laying on the Winifred Line was done with a machine. Work was commenced on October 10th, 1913, and completed on November 18th.

Second-hand 56 and 60 pound rail was used with fir ties. The track was side surfaced during the summer of 1914, and some ballast has been placed since that time.

Right of way fence with the proper crossing facilities was built where required. A large part of the fence is a combination woven and barbed wire, used on account of the line passing through a sheep country. Portable snow fences are maintained where protection is needed.

Good water in sufficient quantity was obtained from running streams on the Roy Line. Permanent water stations were established at Roy Junction, Armelle and Roy. On the Winifred Line water supply is not good and was hard to obtain. For construction purposes a dam was built across Dog Creek at Christina, but this water was not of good quality for locomotive purposes. Wells were drilled at Winifred, but the water also proved to be of poor quality.

Combination freight and passenger depots were built at Hilger, Roy and Winifred, and smaller structures at the less important places.

Telegraph and Telephone material was distributed by work train. Telephones are used for dispatching purposes, being installed in the depots and in booths at blind sidings.

These lines are operated as part of the Northern Montana Division, the Division Offices being in Lewistown. The ordinary branch line equipment is used as the traffic is comparatively light.