

## THE NEW ENGLAND BRANCH

## VALUATION SECTIONS NORTH DAKOTA 3 AND SOUTH DAKOTA 4.

The New England, or so called "Cannon Ball" branch extends from McLaughlin in the northern part of Corson County, South Dakota, about one hundred thirty-three miles in a general northwesterly direction through Morton and Hettinger Counties to New England. About nine miles of this line lies in the state of South Dakota, and is called Valuation Section South Dakota Four. The remainder is in North Dakota and is called Valuation Section North Dakota Two.

The line was constructed by the Chicago, Milwaukee & St. Paul Railway Company in 1910 to furnish transportation to the public land opened under Federal Homestead Laws in the Standing Rock Indian Reservation, and to other land in the region of the North Fork of the Cannon Ball River. The country was not developed to any extent at the time of construction.

Reconnaissance was made in May, 1909, when a party of engineers accompanied by officials of the Railway Company made an exploration trip and outlined the general route to be pursued in the surveys.

Four locating parties were placed in the field soon after the reconnaissance report was made. The parties were able to secure some supplies locally from ranchmen and homesteaders between Mott and New England, but for the line lying between McLaughlin and Mott supplies were hauled from towns on the main line. The location surveys were completed in September, 1909, and construction was undertaken at once, under the supervision of an Engineer of Construction with offices at Miles City, Montana, and a Division Engineer assisted by Resident Engineers and parties in the field.

As originally built this branch line left the main line at a point about one and four tenths miles west of McLaughlin. Later the track was laid from McLaughlin to the Junction and branch line trains are operated into McLaughlin over an independent track.

Leaving the main line about one and four tenths miles west of McLaughlin the line bears northerly across the Standing Rock Indian Reservation to Shields. At Shields the line begins diverging toward the west and from Leith bears almost due west to New England. The gradients between McLaughlin and Cannon Ball River crossing near Shields are rolling with a maximum of one and two tenths percent. From the Cannon Ball River the line ascends along Shields and Dog Tooth Creeks with easy gradients and good alignment to mile Fifty-one. At mile Fifty-one an ascent is commenced and from there continued on a one and one and a half percent gradient to mile Sixty, where the divide between

the North Fork of the Cannon Ball River and Flasher Creek is attained. This divide is followed to Mile Eighty-six and from Mile Eighty-six to New England the North Fork of the Cannon Ball River is followed very closely.

Between Miles One and Ten, three crossings of Oak Creek were necessary and several other crossings were avoided with channel changes. Numerous channel changes were also built along Dog Tooth Creek and important changes were made in the Cannon Ball River Channel, in Miles One Hundred Four and One Hundred Thirty-three.

The land in the Standing Rock Indian Reservation is used largely for grazing, and the land along the Cannon Ball River is used for grazing and dry farming. Some coal is mined in Mile One Hundred Twenty-six.

Contract for the grading, bridge and culvert work, and track laying was let to McIntosh Brothers of Milwaukee, who sublet the work to two other contractors. These sub-contractors in turn relet the work in short sections of from one to four miles. It was necessary for the contractors to construct wagon roads to transport their equipment, material and supplies to the work as very few highways were in existence in this locality at the time of construction. The Northern Pacific branch line had not yet been built into Mott, consequently supplies were hauled from points on the C.M. & St.P. Railway.

An extensive material yard was established at McLaughlin, for use during construction and the most of the supplies and material were hauled from there.

The grading was done with team outfits, grading machines, wheeled scrapers and fresnos being used. The cut quantities as a rule were less than embankment quantities and many cuts were therefore made sufficiently wide to permit the use of grading machines. Common earth, hard pan, loose and solid rock were encountered. Solid rock was generally of a floating nature. That is it did not occur in continuous bodies, but in the shape of large boulders or thin irregular ledges. Removal of this material therefore was difficult and expensive. The common earth was heavy and difficult to excavate. About nine miles east of Mott are a number of cuts through dry granular sand, which was very difficult to load and haul. A compromise classification was allowed for this material.

After the grading was finished in Mile One Hundred Four a washout occurred necessitating the replacement of a large amount of yardage.

Numerous prairie fires originating from construction camps were the cause of damage claims, and fire guards were plowed as a matter of protection.

Bridge and culvert material used between McIntosh and Mile post Fifty-five was hauled from the material yard at McLaughlin by team, and such material used between Mile Fifty-five and New England was hauled from Morristown, South Dakota. Culverts consisted largely of cast iron pipe, which was obtained in the East and delivered to the Company lines at Chicago. The pile bridges were built in accordance

with the standard plans of the Railway Company. Piles were of cedar, and caps, guard rail, and bracing were of Western fir. The bridge over the Cannon Ball River, near Shields, consisting of one fifty foot deck girder span and one one hundred thirty foot through steel truss supported on concrete piers with pile trestle approaches is the most important structure on the line. The concrete was placed, and the steel work erected by the Railway Company forces. The Railway Company furnished all bridge and culvert material.

McIntosh Brothers did the track laying, using a Roberts Bros. machine. Work was begun at the Junction May 27th, 1910, and followed the grading as fast as possible, reaching the Cannon Ball River crossing, Mile Thirty-four, on July 10th, where it was held up during the construction of the bridge. Work was resumed at this point on August 26th, and track reached New England on November 17th, 1910. New 65 pound steel rail was used for the main line and lighter material in the side tracks. Oak, cedar and fir ties were used, and tie plates were placed on the curves.

Some ballast was obtained by widening a gravel out in Mile Fifty-nine. This work was done in 1913, the material being loaded by hand. The gravel ballast for the first ten miles out of McLaughlin was hauled from Paragon, Montana, and was placed in 1911. The cinder ballast, some of which is placed yearly, is taken from the engine terminals at McLaughlin, McIntosh, Marmarth and Mobridge. A portion of the roadbed is ballasted with earth.

The right of way has been fenced where conditions require it, and the proper crossing facilities built. The portable snow fence was placed in 1911 and the permanent snow fence built in 1912.

As previously indicated the territory was sparsely settled at the time of construction, consequently a large number of the road crossings have been graded subsequent to the original construction.

Temporary water supply stations were installed at the Cannon Ball River and in Miles Fifty-five, Sixty-eight, Eighty-four, One Hundred Four, One Hundred Nineteen, and at New England. Permanent stations have been built at Tuttle, Shields, Raleigh, New Leipzig, Mott, New England, and Leith, and are in some cases equipped with windmills. The temporary stations were equipped with steam pumps and 10,000 gallon capacity tanks.

Temporary coaling stations for use during construction were installed at McLaughlin and New England and in Miles Fifty-one, One Hundred Four and One Hundred Thirty-four.

Standard combination freight and passenger depots were built at Shields, Brisbane, Leith, New Leipzig, Bentley, Mott, Regent, and New England, and smaller shelters at the less important stations. A two stall engine house has been built at New England. Material for the buildings was delivered by train and construction carried out by Company forces.

Material for the telephone and telegraph line was distributed by work train. The pole line averages 35 poles per mile, and carries two No. 18 wires. Telephones are used for dispatching purposes, being installed in booths at "blind sidings" and in the depots.

This branch is operated as a part of the Trans-Missouri Division, the usual branch line equipment being used.