THE CHEYENNE BRANCH

VALUATION SECTION SOUTH DAKOTA 3.

Valuation Section South Dakota Number Three covers the entire so-called Cheyenne Branch, extending from Trail City, on the Moreau line (Valuation Section South Dakota No. Two) through Dewey, Armstrong, Ziebach and Meade Counties to Faith, South Dakota, a distance of about one hundred and six miles. The line was constructed in 1909-10 by the C. M. & St. P. Ry. Co., to furnish transportation to the public land then being opened under Federal Homestead Laws, in the Cheyenne Indian Reservation, and to the other lands in the above named counties.

The first reconnoissance of this territory was made in November, 1902. This party left Evarts, South Dakota, (about twelve miles down the river from Mobridge) crossed the river and made an examination up the Moreau River as far as Virgin Creek, thence following the creek south and southwesterly to the divide between the Moreau and Cheyenne Rivers, thence west along the divide to the west side of the Cheyenne Indian Reservation, a distance of about fifty miles, thence southwesterly to Belle Fourche, near the west line of the state, a further distance of about ninety miles.

In 1909 further examinations were made, one of which departed from the main line near the west end of the Missouri River bridge, and extended almost due south for about thirty-five miles, thence westerly through the center of the Cheyenne Indian Reservation. In the meantime a location survey had been made for the intermediate line known as the Moreau Branch, lying about half way between the route just previously described and the main line of the Pacific Coast extension. (See Historical Sketch of Valuation Section South Dakota No. Two).

Early in the spring of 1909 a location party was transferred from their work on the Moreau line to make preliminary surveys from the Moreau River up Virgin Creek, thence west along the divide between the Moreau and the Cheyenne Rivers, a distance of about one hundred and fourteen miles being covered.

A second party made the survey of various lines to find a feasible route from the head of Claymore and Snake Creeks to the mouth of Virgin Creek and the Moreau River. After making about fifty miles of preliminary, a location was made to Virgin Creek by the way of Du Charm Creek.

A third party made a location survey west from the head waters of Virgin Creek along the divide between the Moreau and Cheyenne Rivers to a point near Eagle Butte, between which points the

preliminary survey that had been previously made was closely followed. At Eagle Butte this survey diverged from the preliminary line on the divide and proceeded west along Elm Creek Valley as far as Arrow Head. From this point to Faith the located line again follows the original preliminary survey. The location surveys were completed to a point about fifteen miles west of Faith.

Approximately three hundred miles of surveys were made in determining the final location of the one hundred and six miles of constructed line.

From Trail City the line bears southeast down Du Charm Creek to the crossing of the Moreau River, a distance of about twelve miles, maximum gradient being two percent, and maximum curvature ten degrees. From the Moreau River crossing, the line follows Virgin Creek about eight miles, thence southwesterly about nineteen miles to the top of the divide near Ridgeview. On this twenty-seven miles the maximum gradient is one and five tenths percent, and curvature three degrees. Numerous crossings of Du Charm and Virgin Creek were necessary, and numerous channel changes were made to avoid other crossings. From Ridgeview west the line follows the divide between the Moreau and Cheyenne Rivers to near Lantry, a distance of about thirty-six miles with a maximum gradient of one and four tenths percent, and maximum curvature of five degrees. From this point Elm Creek Valley is followed to the present terminal at Faith, which is in the northeast corner of Meade County. The maximum gradient on this last thirty miles is one and twenty-five hundredths percent, and the maximum curvature five degrees.

At the time of construction this territory was used for cattle range with ranches many miles apart. In the Indian Reservations a few Squaw men and Indians lived on small ranches along Virgin and Elm Creek. The country being undeveloped, furnished no supplies and it was necessary to freight by wagon all sustenance and supplies used by the survey parties and later by the contractors

Grading was done under a contract with McIntosh Bros. of Milwaukee who sublet the work to Shugart & Barnes Bros. of Iowa City They in turn relet a large part of the work to smaller firms.

The construction was carried on under the direction of a Division Engineer, assisted by five Resident Engineers and parties. The Division Engineer reported to the Engineer of Construction, whose office was in Miles City, Montana.

The material yard was established at Wakpala, which was headquarters for the contractors and engineers. A wagon road was constructed across country from Wakpala for the transportation of supplies and material. This required the installation of a ferry for crossing Grand River, and a temporary wagon bridge over the Moreau River. The minor creeks were forded, and being subject to sudden floods often delayed the movement of supplies. The road was largely through gumbo soil, which made it practically impassable in the wet seasons.

The grading material encountered along the Du Charm Creek was the characteristic "Bad Lands" formation of hard clay shale, gumbo and cemented glacial drift, classified as loose and solid rock. Loose and solid rock was encountered in cuts along Virgin Creek Valley in sixty-six miles of open rolling prairie, between Ridgeview and Faith some gumbo and hard pan was found.

Teams with grading machines, fresnos, and wheeled scrapers were used for the grading. Powder was used to loosen the stratified rock, large boulders and glacial drift. The grading was pushed energetically in spite of the difficulty in obtaining supplies, repairs, etc., and was completed to Faith in November, 1909. Parts of the grade along the hill section were washed out during construction, which necessitated the extra expense of moving outfits back for small yardage jobs. Delays in securing town sites on the Indian Reservations necessitated the grading of a number of station sidings after the original construction had been completed.

The crossing of the Moreau River is effected on a one hundred twenty-six foot steel through truss span with a pile trestle approach. The other bridges on this line conform to the Railway Company's standard plans. Piling is Western cedar, the caps, guard rail, bracing, etc., of Western fir. The bridge iron was shipped from Milwaukee and Chicago.

Culverts were of cast iron pipe, purchased in the East and delivered to the Company lines in Chicago.

The Railway Company furnished all the bridge and culvert material, a material yard being established in Wakpala, and material for structures on the first few miles was hauled by team from the material yard. For the structures farther west the material was unloaded from the track as it was extended to the west and was hauled by team to the points of erection. In general this haul was about fifty miles as it was necessary to deliver material about this distance to insure no delay to track laying.

Track was laid with a Roberts Bros. machine and followed the grade completion as rapidly as possible. Work was begun in July, 1910, and reached Eagle Butte, mile sixty-five on September 20th, of the same year. It was then decided that it would be inadvisable to carry track laying beyond Eagle Butte that season. The South Dakota Railroad Commission took up the matter on the protest of the homesteaders and merchants west of Eagle Butte, and in November, 1910 formally ordered the remaining forty-two miles of track laid into Faith, regardless of the fact that the ground was frozen and the Railway Company was not prepared with the material. The roadbed between Eagle Butte and Faith was badly cut up due to its use as a wagon road for freighting supplies. The Railway Company paid contractors about $10,000 in force account bills for redressing the roadbed and filling over culverts to permit track laying to Faith by January, 1911. It was also necessary to grade side tracks and engine terminals at Faith to permit the operation of the line. The main line was laid with new 65 pound steel, delivered to the Company lines at Chicago. Ties were of Western

fir and tammarac.

Parts of the first forty miles were ballasted with cinders from the Mobridge engine terminal. The remainder of the line is surfaced with earth.

Temporary buildings were constructed at the material yard at Wakpala and at other points where required. Material for the permanent buildings was delivered by train after the track was laid. Standard combination freight and passenger depots were built at La Plant, Eagle Butte, Dupree, Arrow Head and Faith, with smaller stations at the less important places. A two stall engine house, coal, dock, etc., were built at Faith.

Provision of a suitable water supply was both difficult and expensive. During construction temporary water stations were installed in Miles Twelve, Eighteen, Sixty-four, Sixty-eight, and Seventy-five. These temporary plants usually consisted of a ten thousand gallon tank and a small steam or gasoline driven pump, and water was usually obtained from flowing streams or from temporary reservoirs made by placing an earth dam across a small water way. Test wells were drilled in Miles Forty-eight and One Hundred Six, the former being 800 feet deep. A well was dug in Mile Sixty-four, and two wells bored in Mile Eighty-four. Permanent stations are at Promise, La Plant, Eagle Butte, Lantry and Faith. Notwithstanding the unusual amount expended for a permanent supply, water is frequently hauled from the Missouri River by train.

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 iron wires. Telephones are used for dispatching purposes, being installed in booths at "blind sidings" and in the depots.

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