## VALUATION SECTIONS IDAHO 4 AND WASHINGTON 6.

The Coeur d'Alene Branch leaves the O. W. R. & N. at Dishman, Washington and extends in a general easterly direction to Coeur d'Alene, Idaho, a distance of about 25½ miles, about 12 miles of which lies in the State of Washington and for valuation purposes is called Valuation Section Washington 6. The other portion is in Idaho and is called Valuation Section Idaho 4. The O. W. R. & N. tracks are used between Dishman and Spokane under agreement with that Company.

The exploration and survey work for this Branch was made in connection with the work on the proposed Plummer to Spokane Line via Coeur d'Alene, an independent branch from Spokane to Coeur d'Alene being decided upon when it was found that an economical main line connection to Spokane through Coeur d'Alene could not be obtained. About 102 miles of reconnoissance, 123 miles of preliminary survey and 41 miles of location survey were made to produce the line as constructed, or about five miles of preliminary and 1.6 miles of location for each m' of adopted survey.

The line as constructed leaves Dishman on light gradients and curvature over a slightly rolling country to the Washington-Idaho state line. Just east of the state line a crossing of the Spokane River is effected on a high steel bridge. From here it follows the Spokane River on an undulating grade line one percent maximum and with 4 degree curvature. Just west of Coeur d'Alene crossings are made over the Spokane & Inland Empire Railway, Spokane & International Railway, and under the Northern Pacific. The terminus at Coeur d'Alene is on a dock at the lake front.

The Construction Engineering Organization consisted of one District and three Resident Engineers with parties. The District Engineer reported to the Division Engineer in Spokane who had charge of several pieces of construction work in the vicinity. He in turn reported to the Assistant Chief Engineer in Seattle.

The line was constructed under the name of The Idaho and Western Railway. Contract for the clearing, grubbing, grading, bridge and culvert work was let to H. C. Henry, who sublet the entire line. Construction was

begun in April 1910 and track laying completed in April 1912.

Practically no clearing was encountered between Dishman and Spokane River. East of the Spokane River and occasional piece of unimproved land and a few orchards were encountered that necessitated clearing. Grubbing was paid for as per specifications.

The grading on the first ten miles east from Dishman was light. Very little roadbed excavation occurs, the embankments being built from side borrow. This work was done with teams. In the vicinity of Spokane River some heavy cuts and fills were encountered, which were taken out with steam shovels. Between here and a point seven miles west of Coeur d'Alene the grading was fairly light, although in Miles 10 and 11 some heavy cuts were taken out. This work was done by teams with wheeled scrapers and fresnoes. The last seven miles entering Coeur d'Alene are fairly heavy with considerable classified material. Steam shovels were used on this work.

Pile trestles were used for necessary openings with the exception of the Spokane River crossing. The material was partly native and partly coast timber delivered over the existing lines of railroad to the closest station and taken to the point of erection by teams.

A temporary frame bridge on piles was built across the Spokane River to avoid delay to track laying before the permanent work was commenced, although track was not laid until the permanent work was well under way. Consequently the material for the substructure was all shipped in on foreign rails. The permanent bridge consists of four 80 foot deck plate girder spans with concrete trestle approaches. Work was begun in August 1910 and finished in February 1911, the substructure being built by contract and the superstructure by Company forces. Through a special arrangement with the Spokane & Inland Empire Railway, the foundation piles were unloaded from the car on their main line, opposite the bridge, and dragged from there to the work. Tools, cement, reinforcing steel, lumber and supplies were shipped to the Spokane Bridge station on the Spokane & Inland Empire Railway from where they were hauled by teams. Much of the excavation was difficult on account of water and large boulders.

At Coeur d'Alene the line passes under Garden Avenue in a 272 foot tunnel. Here a through cut was taken out and backfilled after the concrete arch was built.

Extensive docks were built on the lake front in Coeur d'Alene for transferring from the lake craft to cars, and vice versa.

Track laying began in November 1910 at Dishman and was extended to Spokane Bridge in December of that year. Work was resumed in February 1911 when six miles were laid. In September track was laid to within three miles of Coeur d'Alene and finished into Coeur d'Alene early in 1912. New 65 pound Bessemer Steel was used with native ties.

Ballasting was done in 1913 from the Spokane River pit. The quality of the gravel was good and no stripping was required. Water tanks were erected at Dishman and Spokane River Bridge during construction. At Dishman the supply is obtained from the City mains - at Spokane Bridge from the river.

Standard right of way fence with cattle guards and crossing gates was built soon after track laying. The material was distributed by work train.

The buildings were erected by Company forces as soon as material could be delivered on Chicago, Milwaukee & St. Paul rails. A frame freight depot 32 by 120 feet was built at Coeur d'Alene, and buildings for section facilities at Dishman, Spokane Bridge and Gibbs.

Telegraph material was distributed by work train and erected by Company forces.

The Idaho Division officials attend to the local operation of the line under the overhead supervision of the General Offices in Seattle. Standard branch line equipment is used.

SPECIAL FEATURES DURING CONSTRUCTION:

Many complications arose during construction due to the interference with existing irrigation systems, and much expense was incurred in special construction to care for the individual cases.

A large expense was incurred at the under crossing of Northern Pacific Railway near Coeur d'Alene in keeping their line open for traffic while excavating beneath them.

Right of way complications in Coeur d'Alene materially delayed and interferred with the construction work and were a matter of large expense.