

\$7,500 for the claim, and at the time they bonded it this price appeared a good one for the seller. As it happened, though, it proved to be a low one for so rich a property, but the buyers took the chances, so they deserve the success they have achieved, for it is the outcome of their enterprising outlay and energetic development of a claim that several other parties had in turn failed to prove of particular merit.

E. P. U. MINES.—The group of mineral claims known as the E. P. U. Mines is situate on a high hill immediately southeast of the town of Greenwood, the western base of the hill being within the city limits. In 1902, shortly after public attention had been recalled, by the profitable opening up of the Providence mine, to the prospective value of the quartz veins known to occur on several claims in the vicinity of Greenwood, Mr. D. W. McVicar, of Nelson, obtain-

gether about 225 tons have been shipped to the smelter, the greater part of it from the Lancashire fraction.

There are several known veins on the E. P. U. group, but only one has as yet been developed to any extent. The quartz occurring where the 85-ft. shaft has been sunk carries free gold and tellurides, the estimated average value of the ore in the bottom of the shaft being about \$125 per ton. The drift at the 60-ft. level has been run south into the hill and the quartz is solid in the face of the drive. On the surface the vein has been stripped along a distance of about 300 feet north from the shaft. Ore of good quality shows for this distance, assaying up to 7 ozs. in gold to the ton. The work done thus far indicates that the shoot of pay ore is at least 350 feet in length without having run out at either end.

The Marjorie and Goldfinch were later included in the E. P. U. group. The Goldfinch is not so high up the hill as the Lancashire fraction. The workings here include a tunnel, in 75 feet, with a shaft sunk about 100 feet from the tunnel level. A fine vein of quartz of good grade is also being opened up on this claim, and the ore is of similar character and value to that of the Lancashire fraction. Several carloads of ore have been shipped and the returns have left a good margin of profit.

A double-track gravity tramway has been constructed to facilitate shipment of the ore from the E. P. U. group. It is 937 feet in length and the difference in elevation between its upper terminal at the Lancashire fraction workings and its lower terminal on Twin Creek is about 700 feet. The wagon road haul from the foot of the tramway to the railway is about a mile, so the cost of shipping the ore is not great. The property is a promising one and its development is in capable hands, so it may be expected to give an excellent account of itself in the future.

ON MINING ENGINEERING FROM AN OUTSIDER'S POINT OF VIEW.

(A. R. Barrow, N.M.E.)

MINING engineering embraces the practice of so many branches of the profession of engineering, that the non-mining engineer, no matter how employed, cannot visit a mine without finding something to interest him. If we qualify the old saying that outsiders see most of the game, by supposing that they see some of it, it is possible that these notes of some impressions may furnish food for thought, even to specialists.

In prospects which are being developed, it is not unusual to see a tunnel being made in the side of a hill which, the foreman guesses, will eventually meet a ledge which he sees outcropping on the surface. Having suffered from missing trains and steamboats, owing to the guesses of local experts as to their times of departure, the outsider mildly wonders where the tunnel will arrive at, and goes on his way. In some cases inquiry will elicit the fact that the tunnel has been lined out in some fashion. One was surveyed with a pair of steel spectacles and a compass, the



E. P. U. Mines Gravity Tramway, near Greenwood.

ed for himself and associates an option on the E Pluribus Unum and Lancashire fraction, then owned by Mr. Chas. R. Pittock and others. Some good-looking quartz had been found in a 20-ft. prospecting shaft sunk on the Lancashire fraction by Mr. Pittock and co-owners. Mr. McVicar deepened this shaft and ran drifts at the 25-ft. and 60-ft. levels. Later he started a tunnel where the vein outcrops lower down the hill. This tunnel is a drift on the vein and six weeks ago it was in 85 feet, with 150 feet more to be driven to reach the bottom of the shaft. More than half the ore between the shaft and the surface to the north of the shaft and above the tunnel has been taken out and stoping south of the shaft has also resulted in a lot of ore being produced. Alto-