



Figure 10. A reduced tracing of a map of the 350 foot (?) level workings of the Rudisill mine drawn by T. Fred Challis in 1934. Schistosity throughout the level is $N40^{\circ}E$. An estimated scale for this map is 1 inch equals 30 feet. The scale is not indicated on the original map.

and the lode zone is expressed as phyllite apparently produced by intense shearing and silicification. The zone is about 40 feet wide at its Dunbar Street exposure. Beside the Southern Railroad track the zone is separated by a diabase dike, and the total width is about 100 feet (figure 6). Pardee and Park describe the deposit as being on the same lode and similar to the Rudisill deposit in that ore veins border a zone of "slate" (phyllite) to a depth of 165 feet where they unite.

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Foliation of the phyllite on the surface strikes about 26 degrees east of north and dips 60 to 70 degrees northwest. At about 155 feet, the ore zone dips about 45 degrees northwest. Between 155 and 255 feet below the surface, the dip of the foot wall becomes increasingly steep and is 68 feet to the southeast of the 45 degree projection at 370 feet.

Badly weathered dark rock believed to be diabase dikes can be seen on the surface, and their emplacement appears to be controlled by the same forces that controlled the emplacement of the ore. Kerr and Hanna mention a diabase dike in the hanging wall at a depth that "disturbed" the deposits indicating that they intruded the deposit after it had already formed.

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The Ore Bodies

The orientation of the ore bodies at the Rudisill, Brush Hill and St. Catherine mines is to some extent uncertain. The orientation of the ore shoots which have been mined have not been described in detail. In general, the veins strike northeast parallel or subparallel to the phyllite zone containing them. Where gold occurs in quartz veins, thicknesses and concentrations suitable for mining normally occur where the vein changes direction or where two or more veins intersect. This