



Figure 9. Underground workings of the "Rudersill" gold mine, 1854. Ebenezer Emmons, Geological Report of the Midland Counties of North Carolina (Raleigh, N.C.: Holden and Wilson, 1956), plate 12.

Summit Avenue and Bland Street behind the Burnup & Sims, Inc. shop. Here the strike of schistosity varies from 15 to 25 degrees east of north and the dip from 55 to 90 degrees northwest. Three quartz veins paralleling schistosity thicken into lenses up to a foot thick where schistosity is nearly vertical. Secondary quartz veins can be seen crosscutting schistosity of the Phyllite in the lot between Commerce and Bland Streets. T. Fred Challis, on a sketch map he drew in 1934, recorded that schistosity on the 350 level of the Rudisill mine strikes 40 degrees east of north while schistosity on the surface is 50 degrees east of north (Figure 10). Two stopes in his sketch strike about 35 and 45 degrees east of north. He did not record dip measurements. The dike rock shown on Challis' map is probably diabase.¹¹ (Pardee and Park note that several diabase dikes can be seen in the mine, but point out that their relation to the ore is uncertain.¹²)

While there are secondary veins extending throughout the phyllite zone, most exploration and mining have been limited to the two main veins described above. At about 200 feet below the surface, the two ore veins are reported to merge and form a single vein and the phyllite zone to a great extent disappears with the single vein continuing to depth at a 45 degree angle to the northwest.¹³

Subsurface geologic structure in the area of the Brush Hill workings, between Bland and Commerce Streets, is uncertain, but should be similar to the Rudisill mine (figure 7 & 8) with the exceptions perhaps, that quartz veins are less well developed. The lode zone there is about 50 feet wide and quartz vein traces exposed are less than 3 inches thick.

On the surface at the St. Catherine mine, veins are not distinctive,