

The latter condition is well shown in the "Parallel" dike on the working plan and in the ideal cross section.

The "Cross dike" passes through the quartz vein and, therefore, was made since the completion of the vein. It can, then, have had no effect upon the vein, except a mechanical one, that is, to cut it in two where it crosses.

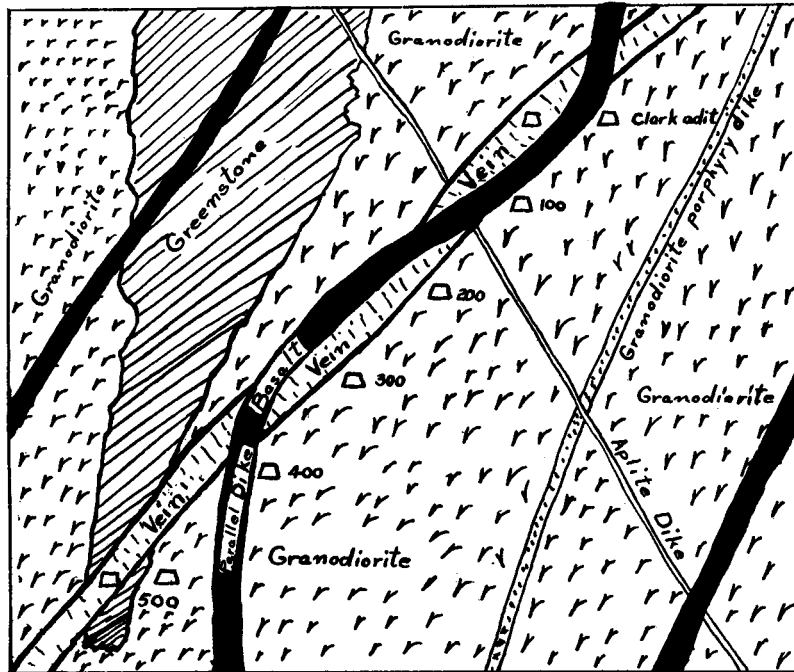
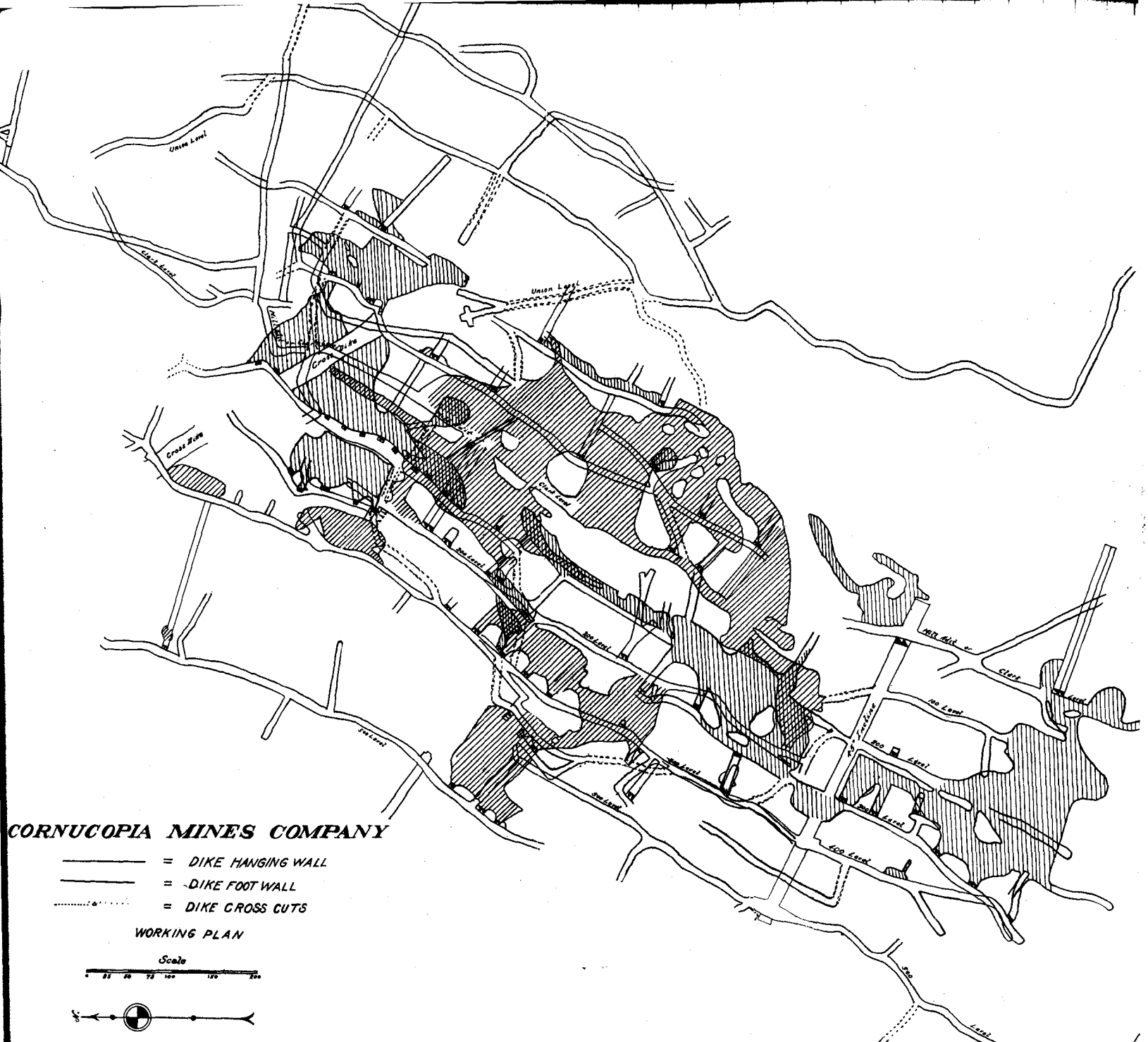


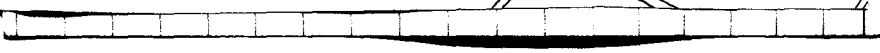
Fig. 13. Ideal cross-section of Union-Companion vein showing country rock and dikes.



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- = DIKE HANGING WALL
- - - - = DIKE FOOT WALL
- = DIKE CROSS CUTS

WORKING PLAN



goes farther towards the middle the cooling is more and more delayed and larger and larger crystals have time to form, so that in a thick dike while its borders are almost glassy its interior contains crystals of considerable size.

1. Search was made along the walls of the dike in contact with the vein to find a branching of either one into the other. When this was found, as illustrated in the sketch, the "glassy" borders of the tongue

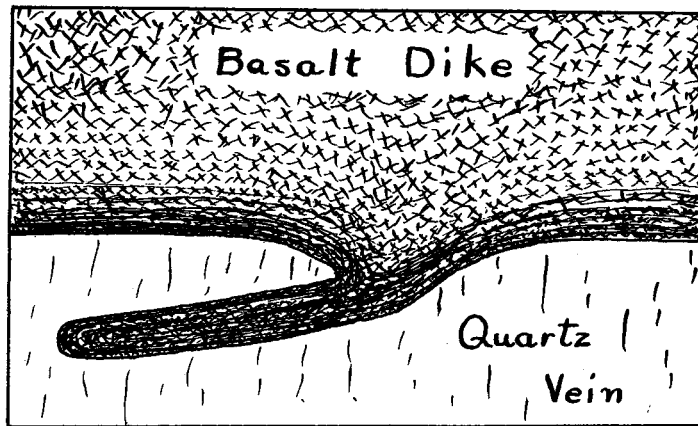


Fig. 15. Tongue of basalt injected into quartz vein.

of basalt into the quartz, together with the "glassy" condition of the main wall of basalt nearby proved that the basalt was intruded into the quartz; that the tongue of the basalt was not a "horse" in the vein and therefore older. This in itself is sufficient proof that the vein is the older.