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AGRICULTURAL GEOLOGY

DURING reconstruction, as the present period is frequently termed, many new applications of the principles of pure science to special fields of endeavor are being made. The principles of geology thus applied during recent years have given rise to economic geology, mining geology, engineering geology, oil geology and perhaps to that branch of the subject indicated by the above title for it is not entirely new. The application of the principles of the science to the solution of the geological problems that are met in agricultural enterprises and pursuits, in brief, the relation of geology to rural welfare may appropriately be considered as agricultural geology.

Such a problem is that of securing an abundant supply of pure water. In regions of copious rainfall it is essential, in those of average to minimum rainfall it is absolutely necessary to consider the properties and the structure of the substrata in their relation to water in order to obtain such a supply. Pursuant to the requirement of this necessity, the United States Geological Survey maintains a branch of service whose work is concerned with the water resources of the entire country. The purity of subsurface water depends chiefly on the filtering power of the yielding rocks. One of the best natural filters consists of residual material of considerable depth. Some rocks below this mantle are sufficiently pervious to hold, transmit, filter and consequently to yield pure water. Certain others are impervious. Another condition is found where the rocks contain joints or cracks along which water moves freely without filtration, conveying to wells or springs contamination from distant sources. This condition is a strong possibility in limestone regions. Artesian water which, in some localities, flows from wells may be found where the properties and structure of