Similar sections are to be seen in the South Branch Southfork river, within a half mile west of here, where the beds are repeated by folding.

It has been noted that the Benton measures are virtually, wholly fine shales, indicating deep water conditions, while the Dakota beds are characteristic of more shallow zones of sedimentation. This relationship indicates a considerable and immediate subsidence after the volcanic activity in the region, and in fact even during the period of eruptions. The association of volcanic action with a sinking terrane is mentioned by Geikie.[1]

Internal Stratigraphy and Structure.

The volcanics as a whole are thoroughly stratified and, in nearly all cases, clearly water laid deposits. Thin beds are the rule, and it is rare that individual strata over ten feet thick are found. Irregular bedding is not uncommon. Layers of fine-grained, highly feldspathic tuffs are frequently seen near the base, and are scarcely to be distinguished from sandstones in the field. Some of these finer and more homogeneous tuffs are so dense and hard that they outwardly resemble lavas. Many varieties of tuff and agglomerate are present, from the types just mentioned, composed of angular fragments of feldspar in a finer ash matrix, to very coarse heterogeneous breccias of explosive ejecta. Some beds are characterized by rectangular crystals of red and white or glassy feldspar up to an inch in size, embedded in a more or less homogeneous fine tufaceous matrix, and these rocks are easily confused with porphyries in the field. Again, distinctly water worn pebbles of varying sizes and proportions occur in a tuff matrix and these by increasing size of fragments pass into agglomerates. No regularity in regard to sequence of strata has been observed in different repeated sections of the volcanics, and it is evident that the various beds are of a

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[1]Geikie, Archibald. Volcanoes of Great Britain, vol. 2, p. 470.
He concludes his remarks by saying,"..... there can be no question that with the one solitary exception of the Tertiary volcanoes, which were terrestrial and not submarine, all the British vents were carried down and eventually buried under aqueous sediments. Even the Tertiary lava fields have in many cases sunk down below sea level since their eruptions ceased."