

pressed that arrangements would be made with the railroad companies to encourage a trade in roof slates to the Western States.

There is nothing to be added at the present time, except that further explorations have shown that the roof slate formations of this State are practically inexhaustible.

#### WHET SLATES.

Before leaving the subject of slates, it may be proper to call the attention of those residing in the Catoctin region to the whet slates of that district. Samples were exhibited which were well adapted to the purpose of sharpening edged tools, but I was obliged to postpone the investigation of the localities from whence they came.

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## CHAPTER IX.

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### CLAYS AND THEIR APPLICATIONS.

The most important beds of clay in this State, rest upon the gneiss and other metamorphic rocks (No. 5 in the table.) These clays form the lowest beds of a series, including the iron ore clay and green sand, which in the first report were referred to the cretaceous period, but for reasons were given on page 54. The iron ore clay should be referred to a period at least as remote as the oolite, and as these lower clays underlie the iron ore clays they are even older. I hope, however, that future investigation will enable us to determine with certainty this interesting branch of geological research. The present report, as I have already observed, is devoted to our industrial resources which, in view of contingencies that may arise, should attract our earnest attention. The scientific relations of the various formations must necessarily be taken into consideration, and in due time be given to the public, but this should be done in connection with a full and final account of our geology, illustrated with maps, sections and other drawings.

Our clays may be divided into three classes :

1. The lowest of the series consisting of beds of white, grey and red clays, with some beds of sand and gravel, which lie principally among the lowest strata. These are elevated into hills which, between Baltimore and Washington, attain an elevation of about two hundred feet above tide-water. They are continuous from a short distance south of the Potomac, north-eastward