

FORMATION No. 14a.

Surgent series of the Pennsylvania reports. Clinton group of the New York reports.

The importance of this group is owing to its valuable beds of iron ore, which has caused it to be fully explored in several of the States which it traverses. It consists of—

1. A series of olive, brown, and yellowish slates, with some sandy layers. Some of them assume a claret color by exposure. It contains fossil stems.

2. Iron sandstone, alternating with a greenish sandy shale. Some of the layers contain sufficient iron to be worked. They are of a dark reddish brown color.

3. Upper shale of a greenish color which changes by exposure to buff colored, and sometimes brown and brownish red.

4. Lower ore shale, greenish, with layers of limestone.

5. A gray calcareous sandstone in thin layers.

6. The upper ore shale consists of blueish and greenish shales, with alternations of thin beds of both pure and shaly limestone, and some beds of calcareous sandstone.

The lower part of this shale contains on both flanks of Will's Mountain, two, and sometimes three, beds of what is called the fossiliferous iron ore, which continues through both Pennsylvania and Virginia, and is largely used in the furnaces in the former State.

7. A thick mass of red shales sometimes slightly calcareous.

A reference to the section will show that this formation, resting upon the sandstone, (No. 13,) appears on the western flank of the North Mountain, and in the principal valleys between that and Martin's Mountain. From thence it is covered by other and more recent formations, until we reach the base of Will's Mountain, where it crops out, and renders the fossiliferous iron ore accessible. Reappearing on the west flank of Will's Mountain, it dips under Dan's Mountain, and does again come up to the surface in this State west of that point.

FORMATION No. 14b.

Scalent series of the Pennsylvania report. Onondago Salt Group and the Water-line Group of the New York reports.

It consists—1st. Of blueish, greenish, and red calcareous shales, with some beds of limestone, resting upon a thick series of gray, greenish, and blueish calcareous shales, with