

of lower strata, while on a ravine west of the creek, in the north-west quarter of section 21, it has once more been observed in the barrens. East of Little Muddy, limestone is said to have been discovered, in digging a well, twenty-two feet below the surface, in the timber on a branch of Little Muddy, considerably below the level of the prairie, in the north-east quarter of section 11, township 3, range 1; but this may have been a higher ledge of hard sand-rock. Three-quarters of a mile north of Richview, it has also been struck in sinking a shaft close to the Illinois Central railroad, near the north line of section 2, township 2, range 1, at the edge of the high prairie. Judge PHILLIPS, of Richview, to whom I am indebted for the information in relation to this undertaking, states that the limestone was found at a depth of about one hundred and twenty feet, from six to eight feet thick. Then followed downward, below the limestone :

Black slate.	3 feet.
Fire-clay, (argillaceous shales).	8 "
Stone-coal.	" 4 inches.
Fire-clay, (shales).	4 "
Sandstone.	31 "
Slaty rock.	7 "
Black slate.	2½ "
Shale.	8 "

No exact data could be obtained for the rest of the work. The shaft was sunk to a depth of two hundred feet, and then they bored sixty feet deeper; but no journal was kept of the strata penetrated.

The Upper Sandstone Formation.—The most westerly point, where any strata were observed above the Shoal-creek limestone, was at the trial-pit on the ridge some miles east of Nashville, in section 17, township 2, range 3, and in some wells north-west of it. They consisted of sandstone and shales, the latter apparently arenaceous, and were not more than about twenty feet thick.

Near Nashville, we find this formation much more largely developed. In the shaft at the lower end of the town, sixty-nine feet of this formation were passed through, and it forms part of the high hills north of town. In the shaft, we find next above the limestone, sixty-two feet of shales, sandy shales, and shaly sandstones, and then three feet of a "bastard limestone," and four feet of shales underneath eleven feet of soil and clay. The bastard limestone was a hard rock, apparently a mixture of sand and lime, and I am strongly inclined to the opinion that it corresponds to the Joliff's mill-rock, on Crooked creek, mentioned below. On Little Crooked creek, a short distance south-east of the shaft, near the south line of section 13, the bank consists of about fifteen feet of soft sandstone, which contains some thin irregular streaks of stone-coal, varying in thickness from that of a knife-blade to over four inches. This sandstone has been struck in several wells in the east part of the town, south-east of the shaft, and also in one a short distance south-west of the shaft, where it reached from ten to twenty feet below the surface; and it is therefore very strange that no trace of it has