DEEP WELLS IN MANITOBA.

- 1085. Similar shale, with several species of foraminifera, some fish remains, and a large amount of pyrite.
- 1090. Similar shale, with foraminifera and fish remains.
- 1100-1105. More calcareous shale, with a large amount of pyrite.
- 1110. Highly calcareous mottled shale, with fish remains, Incoeramus prisms and many foraminifera.
- 1115. Dark and light clay shale, both highly calcareous, containing pyrite, prisms of Inoceramus, fish remains, and many species of foraminifera, of which Mr. O. Davies Sherborn has kindly determined the following, viz. :-Globigerin acretacea, d'Orb., G. bulloides, d'Orb., Cristellaria rotulata, Lam., Planorbulina ammonoides, Reuss, Anomalina rotula, d'Orb., Bulimina variabilis, d'Orb., Textularia globulosa, Ehr., Verneuilina triquetra, d'Orb., Marginulina variabilis, Neug.
- 1120. Very similar shale.
- 1125. Slightly calcareous clay shale, with fish remains, Inoceramus prisms, a few foraminifera and crystals of selenite.
- 1180. Soft light-grey clay shale, with many fragments of shells of Inoceramus and Ostrea, and many foraminifera, crystals of pyrite and selenite.
- 1134-1140. Similar shale, with crystals of pyrite, and a few badly preserved foraminifera and prisms of Inoccramus.
- 1145-1180. Similar shale or marl, with pyrite, fish remains, Inoceramus prisms and many foraminifera, *Globigerina cretacea* being especially abundant.
- 1185-1195. Slightly calcareous shale, a few fish remains, crystals of selenite and a few foraminifera.
- 1205. Slightly calcareous shale, a few fish remains, and irregular fragments of calcite and selenite.
- 1210-1245. Similar shale, with pyrite, a few fish remains, foraminifera, and prisms of Inoceramus.
- 1250-1275. Similar shale, with fish remains, prisms of Inoccramus, pieces of shells of Ostrea, a few foraminifera and crystals of pyrite.

No. 13.—The material brought up by the drill in this part of the boring is generally a very dark-grey soft unctuous, and but slightly calcareous clay, from which were separated by washing some fine graphite-like flakes of clay shale. These have much the appearance of the Benton shales elsewhere in Manitoba, and was previously regarded as such by the writer, but as this band comes between two highly calcareous zones, it has been thought advisable to group it in with the Niobrara formation. The following list gives the particulars of some of the beds :—

- 1280. Dark grey non-calcareous clay shale, with a few fish remains and many crystals of selenite.
- 1285-1295?. Dark slightly calcareous shale, with a few prisms of Inoceramus and fragments of fish remains.
- 1300?. Similar shale, with a few specimens of Globigerina cretacea.
- 1305-1345. Dark unctuous non-calcareous clay shale.
- 1850. Similar shale, with fragments of a nodule of calcareous ironstone.
- 1855-1380. Similar shale breaking into minute flakes.
- 1885. Slightly more compact shale.