## REPORT FOR 1893.

struck, with possibly some in a higher position, but with a view more particularly of ascertaining the true direction of the inclination of the underlying strata. Great difficulty was experienced in drawing the stand-pipe this time. It appeared to have been nipped at the bottom and held fast by boulders, which must have slid down against the pipe and eaught it just above the projecting Two jack-screws and four powerful levers of long drive-shoe. sticks, two on either side, were fixed under the clamps at top, and the combined weight of all the crew brought to bear thereon; nevertheless, for two whole days we could not start the pipes. We had almost despaired of doing so, when at length the obstruction at bottom gave way, and the pipes started with a jerk several inches. After that they soon began to draw with comparative ease. On the 2nd of October we had all up and removed down stream, and by the 4th were again under weigh driving the stand-pipe at bore G. At a depth of forty feet we struck a boulder, but succeeded in moving it aside. At sixty-five feet we met with very coarse, hard gravel, which caused much delay. On the 6th, at a depth of seventy-one feet, we struck boulders again, which could not be moved or broken up. We had to withdraw, move a few feet, and make a fresh trial. This time we struck boulders again in about the same position, and in an attempt to drive through them, our pipe became so badly bent at bottom as to prevent the rods passing through. We withdrew a second time and moved several feet further in, but with no better result. On the 13th, between forty and fifty feet down, we struck a boulder, which we passed; but the next day, at sixty-five feet, we met others, and for the second time bent up our pipe, which necessitated withdrawing. The pipes were straightened as well as could be effected with the means at hand, and let down again in the same hole. When the boulders were reached, the small casing-pipe was put down inside, with which we succeeded in reaching a depth of sixty-nine feet, when another lot of boulders were struck and our pipe badly broken, compelling us to abandon the attempt. It would appear as if an extra number of boulders had been accumulated at this particular point. Most probably it formed the edge of an ancient glacial moraine, where the erratics, carried or pushed along by the ice-stream, had been shoved on one side and left behind-arranged, as is usual in such instances, in long lines closely packed together and piled on each

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