

this hose a stream of water is forced into the hollow drill-rod, from which it escapes only at the bottom of the bit, and passes rapidly out of the hole at the surface of the rock, carrying away all the grit and borings as fast as produced.

With this machine a core is said to be easily brought to the surface from any depth within a thousand feet.

#### VIII.—THE BASIN WEST OF SPRING HILL.

South-west of the disturbance near the church at Spring Hill mentioned on page 23, several seams have been discovered, having a course varying from south forty degrees west near the bottom of the hill to south twenty degrees west at the summit. The crops of the seams appear to be affected by an anticlinal, whose axis lies to the south of the lowest seams, or those at the summit of the hill. At the Hibbard Pit a large seam has been intersected by a shaft which is supposed to be the continuation either of the main seam or of the thirteen foot seam. It is alleged that this seam has been found near fifteen chains south-east of the boundary of the General Mining Association's tract and about seventeen chains southwest of the Hibbard Pit. According to the structure of the rocks the crop of this seam should pursue a gently curving course towards the junction of the Mountain Road and the Upper Macan Road, and in the absence of faults it would then trend more to the west and sweep down the valley of the Macan towards Southampton. Numerous bore holes have been put down for a distance exceeding a mile to the north-west of the prolongation of the General Mining Association's tract without striking this seam. Further trial holes to the rise will probably be attended with successful results.

The smaller seams near and upon the summit of the hill will curve more sharply to the south, being nearer the axis of the anticlinal, and probably take an easterly course before returning towards the valley of the Macan. From the Mountain Road all the way to Southampton, a distance of seven and a half miles,