

feet of good coal, but this thinned out again, and gave place to clay and shale. At the next opening it showed a couple of feet of rather slack coal. In the third opening, where the seam was first uncovered, it was sunk upon for about ten feet, the principal band of coal only, in the seam, being tested. This was found to maintain pretty much the same character throughout, being rather slack, or shelly coal, but the band, which at the surface measured nearly five feet across, had contracted to three feet two inches, at bottom of pit. At the fourth opening, where the seam exhibits the great width of twenty-four feet, the principal layer of coal was again sunk upon to a depth of about eight feet, and then cut across from wall to wall. Here it was found to maintain its thickness of something over thirteen feet of good, solid, bright coal. A few layers of shale or batte, began to appear towards the bottom of the shaft. The outcrop here was situated at such a low level, and the soakage of water from above was so great, that a fair trial could not be given the seam. In the tunnel or drift on the last outcrop, the coal remained dead slack and of a dull colour throughout, and at twenty-eight feet on the strike, it had dwindled down to three feet in thickness.

While these testing operations were being carried out, several attempts to reach the bed-rock on either side of the brook, and on the supposed line of strike of the principal coal seams were made. In no case could we succeed, owing to the enormous amount of drift material covering the surface, most of which was so tough and firmly cemented together, that in our efforts to penetrate it, all our tools were completely used up. In some instances, the influx of water compelled us to abandon the work, as almost invariably when a certain depth was reached, water made its appearance in greater or less quantity. Small fragments of loose coal were scattered through the gravel in several pits, but as these may have been derived from the outcrops already mentioned, they afforded but little clue, as to whether the seams were continuous or not.

A close examination of the contact of the coal measures with the older (Silurian) ! schists, at all the places examined, left little room for doubt, of the existence of a great break, being an upthrow of the older series on the South side. The effect of this break was the complete cutting off of the coal measures which at one time must have occupied an extensive area, and leaving behind a few small segments only, of the northern edge of the trough. But one