

situated upon the Coal Brook, and underlying the seams of bituminous coal worked by the General Mining Association.

The respective out crops of the deep seam and the Fraser oil coal being 528 yards apart on the surface, and the general dip N. 42° E., at an angle of 18 degrees, or 1 to 3, the oil coal will underlie the deep seam 528 feet in perpendicular section.

It is situated about 60 feet below the tabulated section given in Haliburton's History of Nova Scotia, which distance is chiefly occupied by strong bands of sandstone, whose actual thickness is not yet proved, thin soft shales with bands of ironstone, *Stigmaria* with *Sigillaria* and a few detached fern leaves (*Neuropteris*), in such soft shale that I have not been able to preserve any good specimens. Immediately above the oil coal are fourteen inches of bituminous coal, but only the lower four inches are of good quality, the upper part being of a soft friable nature, producing a great deal of ash.

The oil coal has a smooth regular parting at top, next to the coal, as well as at the bottom, next to the oil shale, but varies in its thickness from a few inches up to twenty. Throughout its entire thickness it has a curled and twisted structure, many of its fractures look like the casts of shells, and the sharp edges are polished and stickensided. No fossils that I am aware of, have hitherto been found in the "curly" oil coal, but scales of calcareous spar are often met with in the joints. The oil shale next below is nearly two feet thick, of a homogeneous character with a shaly cleavage of various thicknesses. In this band a few scattered ganoid scales have been found, and two or three varieties of lepidodendron beautifully preserved, also leaves of *Cordaites* of various lengths and breadths, which have undergone so little change, that pieces from four to six inches long, and in breadth about a quarter of an inch, could be removed when the shales were first split, and were so elastic that they could be bent considerably without breaking. In the argillaceous shales below are bands containing innumerable *Cypris* and *Spirorbis* shells. The crop of a small seam of coal which must underlie the oil coal about thirty feet is seen in the brook. There are surface indications of the coal measures continuing for a considerable distance towards the south-west, and this has been proved to be the case by Robert Culton, who is opening up a seam of coal upon his farm upwards of one mile and a quarter distant, to the rise of our mine, which will be alluded to hereafter.