

purpose on the left bank of Salmon River, about two miles north of its embouchure in the north-east arm of Grand Lake. The boring here was continued to a depth of 403 feet, but with the exception of one coal seam ^{One foot ten-inch coal seam.} of one foot ten inches, near the surface, and which is supposed to be the same as that now generally worked, and a bed of "bituminous shale and coal" of eight feet thick, met with at a depth of 262 feet, no strata of any economic importance were reported.

The method of boring, however, was of an unsatisfactory character, and ^{Unsatisfactory method of boring.} even supposing it to have been scrupulously and carefully conducted, was such as might easily have led to erroneous conclusions. Under these circumstances it was felt that before any reliable conclusions could be reached respecting the productive capacity of this coal field, further explorations by boring must be made. In pursuance of this view a second boring was begun in 1806 on Coal Creek, about five miles distant from the one on Salmon River, in a direction of west 20° south. This boring attained a depth of ninety-six feet, but failed to shew the existence of other seams beneath that to which the title of "the surface seam" had come to be applied. In 1870-1871, another boring equally unsuccessful was made at Salmon River to a depth of 217 feet, at a point about half a mile to the north of the first.

Notwithstanding these repeated failures, however, the belief was very general among those acquainted with the district, that other and thicker seams would eventually be found beneath that which had been opened and worked near the surface at so many different points. This belief found expression in the Local Legislature, and during its last session (1872) an appropriation of four thousand dollars was made for the purpose of again testing the question. At the same time application was made for such ^{Assistance from the Geological Survey.} assistance on the part of the Geological Survey as might serve to guide the Government in the judicious expenditure of the money. It was with this object in view that I was directed in June last to proceed to examine the Grand Lake Coal Field.

In the maps which are being prepared to illustrate the geology of the ^{Maps.} region we have examined, we have availed ourselves of such material as could be furnished by the maps and surveys of the Provincial Crown Land Department, and we would here acknowledge our obligations to the officers of the department for their ready assistance and courtesy.

The following sub-divisions of the Carboniferous system are the same ^{Subdivisions of the Carboniferous system.} as those proposed by Dr. Dawson and Sir W. E. Logan for the Carboniferous rock of Nova Scotia, with some unimportant modifications rendered necessary by the somewhat different associations and the greatly reduced thickness of the various groups of strata in the central Carboniferous area of New Brunswick. Thus Dr. Dawson's divisions: 2, Middle Coal formation, and 3, Millstone-grit series, are included in the present report