

Suppose, for instance, that the workings of a mine are approaching old ones which are probably full of water, and that the only record of their position is some rough plan on a different scale to that generally adopted, I do not assert that under such circumstances, with great care in taking the necessary measurements, a junction of the workings cannot be safely made, but that the risk of error in measurement is increased by the difference between the regular use of one scale and the occasional use only of the other.

In addition to the uniformity of scale and conventional signs, such alterations of the seams or veins, as I have alluded to, should be briefly described on the plan or on a book provided for that purpose, and in the case of abandonment of any mine, the fullest particulars should be obtained and recorded before it is closed.

Having thus endeavored to show the practical importance of mining records, I will now briefly point out how the intelligent manager of mines may contribute to our geological knowledge.

"Geology," it is remarked by Professor Phillips, "whether regarded as a history of the early physical revolutions of the earth, or as the science by which this history has been in some degree recovered, has really no other foundation than exact observation and careful induction."

Whilst those conditions of the mind necessary to a proper exercise of the latter process may not be generally possessed, there are few who have it not in their power to increase the basis of facts on which the superstructure is by such process to be reared. The identification of seams by a comparison of the over and underlying strata, the tracing of faults from one mine into another or through a district, the observance of the alterations of level, or dip and rise of seams, the structural character of the coal, the peculiarities of mineral veins, and of other circumstances worthy of note, may, in addition to their practical importance, materially assist in arriving at correct conclusions on many points respecting which there is still much indefiniteness.

In coal of a bituminous character there is generally a peculiar cleavage or facing, the distinctness or irregularity of which aids or impedes the working of it. According to the character of this cleavage the coal is broken off with greater or less ease, and its size when prepared for the market varies. In a practical point of view attention on the part of the managers cannot be too carefully given to this peculiarity, as it is found that in some cases larger pieces of