

We have edited the accepted manuscript in response to the feedback. We appreciate the attention to detail. We generally rephrased where suggested, even in a few instances where we believe our existing text was unproblematic. Two points require further discussion:

**Regarding remark (2):** according to the Oxford English Dictionary, one definition of *scale* is "[r]elative or proportionate size or extent; degree, proportion". We consistently use the word *scale* in this sense when we speak of, for example, *feature scale*, or *large-scale features*, with implied proportionality of feature area to the characteristic (Voronoi) area associated with each monitoring well in the grid. This meaning of *scale* (dimension of real entity relative to characteristic length) is a related, but slightly different, meaning to the one discussed in the feedback (dimension of map or model relative to dimension of real entity). It is maybe regrettable that the dimension of the real entity is in the numerator in one sense and the denominator in the other, but this is a quirk of English. Our usage is correct according to an authoritative dictionary. Our usage is also, as acknowledged, in keeping with common practice in the geosciences.

In places where there might be ambiguity as to whether *small-scale* referred to short wavelength or low resolution, we rephrased. In other places, we believe keeping our existing terminology is the best decision for clarity and correctness.

**Regarding remark (18):** our description is correct as written. Our algorithm is essentially as described in the feedback, except we employ a dynamic step size. On every iteration, the direction of steepest descent is identified, and a step slightly larger than the last successful step is attempted in the downgradient direction. If the attempted step is too large, goes past the local minimum, and fails to reduce the objective function, the attempted step size is continually halved until the objective function is successfully reduced. A gradient-descent iteration is only considered completed once the objective function has been successfully reduced by means of a step downgradient. This procedure is described in the manuscript.