

September 13, 2004

Dr M Armstrong
Assistant Editor
Journal of Mathematical Geology
By email

Dear Madam,

On February 18, 1991, *JMG*'s Editor advised us that *Precision estimates for ore reserves* was rejected. Dr G S Koch Jr acknowledged that he did not have the mathematical skills to follow our computations. Dr R Froideveaux deemed our paper "*irrelevant at best and misleading at worst*" but his knowledge of sampling and statistics appeared distressingly trivial. In contrast, Koch is the coauthor of *Statistical analysis of geological data*, and my textbook on *Sampling and weighing of bulk solids* turned out to be a best seller that has been translated into Mandarin.

So I felt justified in requesting a third opinion, a task *JMG*'s Editor entrusted to one of his Associate Editors. Attached is a copy of your undated, unsigned and mind boggling review. Your statement that kriging variances "*were developed precisely to handle the case of (spatial) dependence*" reflects the same abysmal understanding of classical statistics as did your paper titled *A study of kriging small blocks*, a study of sorts that solves the rise and fall of kriging covariances and kriging variances by cautioning against oversmoothing (see *CBul198903*). Do you really believe that the requirement of functional independence may be violated a little but not a lot? So a little kriging is innovative science but a lot of it is still not a scientific fraud?

Surprisingly, the first geostatistical textbook was published in 1977 but you and your coauthor did not caution against oversmoothing until 1989. In the meantime, prudent practitioners may have smoothed much too little, the brazen ones perhaps a little too much, and the odd gifted scholar may well have accidentally smoothed to perfection. In fact, a treatise on perfect smoothing was reviewed by and published in *CIM Bulletin*, another journal where peer reviewers are as dedicated to preserving the junk science of geostatistics as those at *JMG*.

It is an irrefutable scientific fact that the practice of computing kriging covariances and kriging variances of **sets** of kriged estimates is the ultimate exercise in futility because it violates the requirement of functional independence and ignores the concept of degrees of freedom. What a shame that the distance-weighted average had lost its variance when geostatistics was hailed a new science in the 1960s, and that so much of it was reviewed and published in the *Journal of Mathematical Geology* on your watch as an Associate or Assistant Editor, a vigilant Voting Member of *IAMG*'s Council, and its most dedicated enforcer of geostatistical dogma.

Yours truly,
Jan W Merks