

December 20, 1994

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Dear Sir:

I trust that you have received a copy of my letter of November 24th to Mr James A Thomas, and that you are aware of my concerns about geostatistical theory and practice. I regret that a convention and a couple of workshops in Eastern Canada make it impossible for me to attend the International Symposium on Geostatistics. Perhaps the most qualified geostatistician on ASTM Subcommittee D17.01.07 could respond in writing to the following questions:

- *why are covariances and variances of functionally dependent variables valid in geostatistics but invalid in applied statistics?*
- *why is the concept of degrees of freedom irrelevant in geostatistics but fundamental in applied statistics?*
- *how are covariances tested for statistical significance?*

Those trivial questions provoke responses of Byzantine complexity in geostatistics which is not surprising. After all, a pair of independent variables in a n-dimensional sample space defines not only an infinite set of distance weighted averages but also *a variance for each*. One might surmise that selecting the single most desirable variance is a rigorous task indeed.

While I wish you the Compliments of the Season and a fruitful meeting early in the New Year, I remain,

Yours truly,

J W Merks
President

Enclosure : copy of "The Properties of Variances"