

Augustus 6, 2004

Mr William H Donaldson, Chairman
US Securities and Exchange Commission
450 Fifth Street NW
Washington, DC 20549

Dear Mr Donaldson,

I brought to your attention on December 8, 2003, that geostatistics inflates mineral inventories because it is a fundamentally flawed variant of mathematical statistics. Geostatistics is applied in geology, mineral exploration, mining, hydrology, oil reservoir forecasting, fish abundance estimation, environmental, geotechnical and health sciences, and other fields where large sample spaces and sparse data sets are encountered, and additional data is expensive to measure or impossible to obtain.

Geostatistical scholars at scores of universities teach to assume spatial dependence, to interpolate by *kriging* and to avoid oversmoothing. Kriging is an eponym to recognize Dr D G Krige, formerly an Honorary Professorial Research Fellow at Witwatersrand University and a pioneering plotter of distance-weighted averages in the famously homogeneous gold reefs in South Africa.

Attached are copies of correspondence between Krige and myself with regard to the variance of a **single** distance-weighted average, which vanished when the distance-weighted average metamorphosed into a kriged estimate. Incredibly, the kriging variance and the kriging covariance of a **set** of kriged estimates turned into the cornerstones of geostatistics. Incredibly indeed because the kriging variance is just as meaningless a measure for variability, precision and risk as the kriging covariance is for spatial dependence. Upon receipt, Krige's answers to my simple questions will be posted on geostatcam.com under *Correspondence*.

The Seventh International Geostatistics Congress (see geostats2004.com) will be held in Banff, Alberta, Canada, from September 26 to October 1, 2004. I urge you to have at least one of your mining experts attend and report to you whether or not geostatistics violates fundamental requirements of mathematical statistics, and why it does not give unbiased confidence limits for contents and grades of ore reserves.

Yours truly,

J W Merks
President