

Initial Potential of Wells from the Granny Creek Oil Field, Central West Virginia

File gcsurfoip.eas contains initial potential data in the usual GeoEas format. Although directional variograms show anisotropy (Figure 1), an isotropic model appears adequate for the limited distances used in kriging. The omnidirectional variogram is modeled in Figure 2 as the sum of two exponential models, one with a ranges of 50m and constant equal to 150, and the second with a range of 700m and the same constant of 150. This nested model is used to compute the values in Figure 3 by ordinary kriging..



Figure 1. Directional variograms of initial potential.



Figure 2. Omnidirectional variogram (points) and fitted model (line).





Figure 3. Kriged estimates of initial potential.

Initial potential data are typically skewed as in Figure 4. Datasets such as this are candidates for normal scores or lognormal transformation before estimation or simulation. Normal scores of this dataset are used in the case study on collocated cosimulation that appears elsewhere on this website.



Figure 4. Histogram of initial potential data.