

## Cumulative Production from Wells in the Granny Creek Oil Field, Central West Virginia

File grprd5.eas contains cumulative production data in the usual GeoEas format. Directional variograms manifest a north-south anisotropy, which in Figure 1 is modeled with an exponential variogram model having a sill of 95,000,000, range of 500 in the north-south direction, and an ratio of 0.4 between the minor and major axes of the ellipse of anisotropy, i.e. between the east-west and north-south directions. A map of kriged estimates (Figure 2) exhibits this obvious anisotropy.

Production data are typically skewed as in Figure 3. Datasets such as this are candidates for normal scores or lognormal transformation before estimation or simulation.



Figure 1. Directional variograms of cumulative production (points) and anisotropic model (solid line).





Figure 2. Kriged estimates of cumulative oil production.



Figure 3. Histogram of cumulative production data.