

ACCURACY STANDARDS IN GEOLOGICAL DATA BASE USING GEOGRAPHIC INFORMATION SYSTEM.

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The study area is located in Una-Utinga Carbonatic Basin in Bahia State, Brazil. In this basin can be found occurrences of Pb, Zn and Ag most of them close to faults and fractures. This paper focus on to analyses accuracy standards in geochemical maps generated by interpolation techniques. Firstly, it is indispensable to evaluate the autocorrelation of the data set. This is done by calculating the Moran index and Geary index. Secondly, it is necessary to calculate the spatial autocorrelation. Using Kappa index of agreement and erros of commission and omission carries this out. The Moran index and Geary index presented a positive spatial autocorrelation that is a necessary condition to create a continuous surface. Three interpolation methods were chosen: inverse distance to power, kriging and minimum curvature. The more reliable interpolation method is defined through residual analysis (Normalized Residual Index). From the resulting geochemical maps, Pb/Zn/Ag anomalous areas were selected so called target areas. Selecting an existing map containing Pb/Zn/Ag anomalous areas, and then comparing the new measurements to those in the target areas achieve the assessment of measurement error. To assist this procedure, anomalous areas defined by a Project carried out in 1990 were chosen and then a spatial autocorrelations was undertaken.