

MINERAL POTENCIAL ANALYSIS OF THE UNA-UTINGA CARBONATIC BASIN BASED ON GEOGRAPHIC INFORMATION SYSTEM.

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The Una-Utinga Basin has been described as having a great potentiality to Pb/Zn/Ag mineralizations. In this basin it can be found occurrences of Pb, Zn and Ag located through carbonatic rocks most of them close to faults and fractures. There are many geological data in this area (geological map, geochemical, geophysical, topographical and structural maps) that converted to spatial database were integrated with the help of a Geographic Information System to decision making. The decision model used in this paper was litho-structural, where the structural map was obtained using the buffer zones along faults and fractures. The geochemical maps were the result of anomalous sub-basins and soil analysis. The geological map represented the favorable lithologies of Salitre formations to host Pb/Zn/Ag mineralizations. Each map was weighted by its importance in the determination of submodels. The combination of these submodels represents the mineral potential of the studied area. The methodology used in part of the Una-Utinga Carbonatic Basin can be used in all basin. Through this methodology we can reveal areas which may be used for more detailed researches.