NEOTECTONIC IMPLICATIONS IN THE SPACE OPENING AND ACCUMULATION OF WATER IN CRYSTALLINE ROCKS

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The classic criteria of surface geology and analysis of aerial photographies for identification of fractured zones, which are the appropriate places for perforation of wells in the crystalline, is a difficult work, with low success index. The current methods are based on Structural Geology concepts of the 1950-60 decades, which need to be revalued, in terms of methods and modern structural ideas, in the context of the actual neotectônic fields. The main aim of this work is the evaluation of the criteria of location of wells in crystalline rocks, in the semi-arid Northeasterner. The areas of this work are inserted in the oriental domain of the Rio Grande do Norte State, Northeast of Brazil. In the Brazilian Northeast, many of the structures considered for hydrogeology are related for the brittle deformation late-Brasiliano (Cambrian), identified, for instance, by the filling for acid veins, or its disposition systematically tranverse to the ductile structure trends, or the association to the folding. Such events can have little or any relationship with the current dynamics, conditioning of the permeability of the fratured water source. The function of the neotectonic reativation of old fractures should be evaluated in this context, trying to preview the directions imposed by the recent fields on heterogeneous populations of fractures, inherited of events happened in different times.