

studi geologi Guna Menentukan Zona Akuifer Potensial di Desa Pakes dan Bandung, Kecamatan Konang, Kabupaten Bangkalan

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Abstrak

Konang district has a problem on fresh water supply particularly in dry season. Two villages in the district, namely Pakes and Konang, are densely populated areas having agriculture activities, so available of sufficient fresh water is necessary. A fresh water source that can be developed in this area is deep groundwater source from potential aquifers. A geological study has been conducted to identify potential aquifer based on lithological aspect and geological structure. According to the regional stratigraphy, the study area consists of Tawun Formation and Ngrayong Formation. They compose of carbonaceous claystone (the oldest rock unit), carbonaceous claystone with sandy limestone intercalations, sandy limestone interbedded with carbonaceous claystone, tuffaceous sandstone with claystone intercalations, and reef limestone (the youngest) respectively. Strike and dip positions of the rocks layers are N110°E/22° - N150°E/26°, located on the south anticline axis with wavy plan to gentle slope of hilly morphology. Among the rock unit, only sandy limestone has fine sand with subangular in shape and open pack. Qualitatively, this rock has good porosity and permeability and is able to store and to flow subsurface water. Thus, the sandy limestone is considered as a potential zone for fresh water resources. Whereas, carbonaceous claystone with clay grain size has low porosity and permeability, so it is potential as a cap rock.