

GEOLOGO-PHYSICAL AND GEOCHEMICAL ROLE OF GASOEVAPOrigen MOISTURE

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There are not many regions at the Earth where the water may be present as vapour in the zones of earth's crust with pre-critical temperature for this water (Larderello, Geysers, Macukava et al.). On the whole the water and its solutions may be only as liquid in the earth's crust up to the depths with temperature 374-700°C. But if a gaseous accumulation, from a critical bubble to a deposit, is formed in the earth's crust, then it always is presented by a mixture of gas and vapours of water (gasoevaporigen moisture). At high temperatures a mol fraction of gasoevaporigen may reach 0,5-0,8. At earth's crust the gasoevaporigen moisture: accelerates emigration of gas from an area of its generation; stipulates gas-phase mass-transfer of chemical elements with forming of stratiform ore deposits; forms oceanic ferromanganesian concretions; displaces natural gases from low levels of earth's crust to upper; forms hydrochemical inversion; limits depth of forming of industrial gas fields; increases dispersion halos of chemical elements around ore deposits; dewateres plutons. At gascondensate fields the gasoevaporigen moisture: has an influence on composition of gas mixture; affects phase transition of a mixture; increases fluid pressure at pressure of saturated vapour; accelerates segregation of gas at zone of flood; forms invert emulsion in a stratum at retrograde condensation of hydrocarbons; stipulates more rapid penetration of gases to earth surface and formation of gaseous anomaly above the hydrocarbons-water contact; increases condensate recovery at cycling-process and oil recovery at injection of CO₂ into fields.