

Nature and source of gas specious in gariz aquifer (Yazd, Iran)

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Gasous and acidic ground water in Gariz aquifer located in South West of Yazd, central Iran cause to economic, agricultural and domestic problems. Gas specious are issued from water wells in the studied area was determined by portable gas detection devise at critical well. Sampling was done in two steps. In first step, six water samples base on depth in saturation zone in aquifer from one well and in second step, twenty water samples have been collected from wells in Gariz area in vicinity to Ernan volcanic massive for determination of major, minor and trace elements and gas specious concentration in solution. Attention has been focused in particular on minor and trace elements and dissolved gas specious (CO₂ & SO₂) which no data were available in the studied area. Relation between faults location, Ernan volcanic massive and soluble major, minor and trace elements and gas specious in ground water was survived by drawing dispersal maps for soluble major, minor and trace elements and gas specious, water temperature and water acidity and comparing them together and with faults location and strike map in studied area. The results show that issued gas specious from water wells are CO₂, O₂, H₂, CO and SO₂ which CO₂ with frequency of 98 percent is the main issued gas in the studied area. Also, activity of Naein-Baft fault branches after Eocen, cut Eastern and Western flanks of Ernan volcanic massive and created natural channels which lead volcanic gas specious into ground water and increase acidity of ground water.

Biography

Hamid Reza Nassery has completed his Ph.D. at the age of 33 years from Charles University in Prague. He has published more than 34 papers in reputed journals and has presented 72 papers in national and international conferences.

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