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Evaluating Variations Of Ground Water Quality During Pumping Test For Area (1) Gol E Gohar Mine

Hosseini Sabzevari M., Karami Gh., Karimi Nasab S. And Zare M.

Abstract

Ground water at Area1 of Gol e Gohar iron ore mine has different origins. It can be divided in two groups. The first group, surface waters in alluvial which have relatively lower dissolve solids. The second group, waters which are in joints and rocks fractures that have high dissolve solids. In order to study ground water flow conditions, a lot of pumping wells have been drilled around this mine and step tests and pumping tests have been done during 2004 to 2006 years. Since these tests are extended and by drawdown cone expansion, ground waters are pumped from far and dipper the aqueous layers. In order to studying the quality of ground water, main water characteristics involve electrical conductivity, pH and water temperature have been measured while the wells are pumping. The results of water quality data analysis show the origin of waters in mine east had been completely different from the west and there is n't any relation between two parts. Also with increasing of pumping rate and more drawdown in pumping wells the water salinity is increased. So it shows salty water layers with high EC in deep parts, in mine east pH is neutral nearly carbonate compounds exist in area rocks never else acidate zone water (existing of sulfur) tended toward to the neutral pH. For the reason that formation of lime stone and dolomite exist in the south section, it was disposed toward to the alkaline.

Keywords: Gol e Gohar iron ore mine, Aquifer, Pumping tests, Electrical conductivity, pH.

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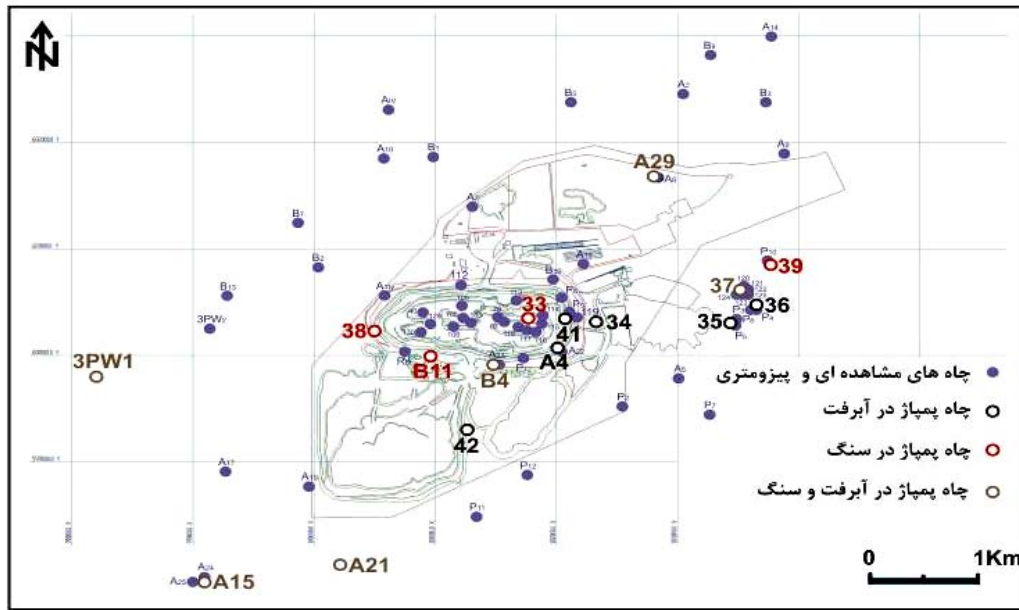
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PW35, PW36, PW37, PW42, A4,)

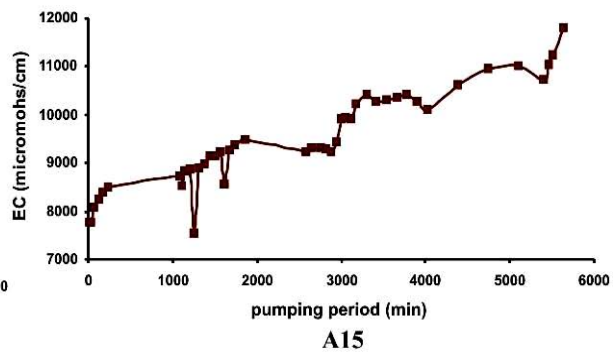
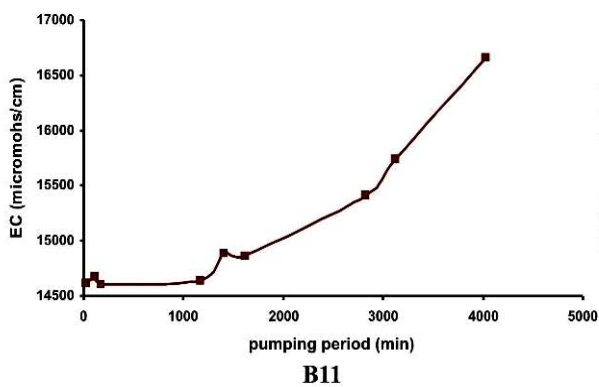
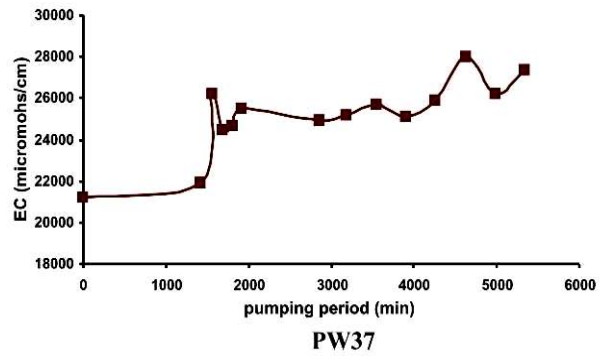
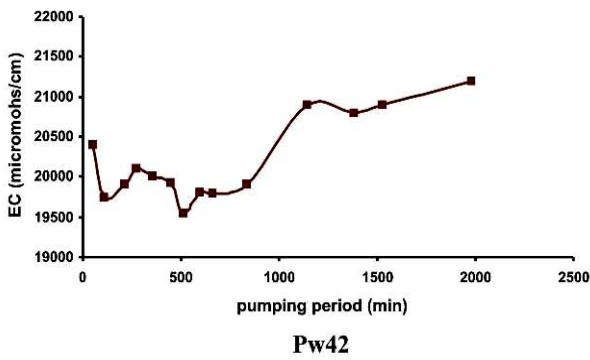
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A21

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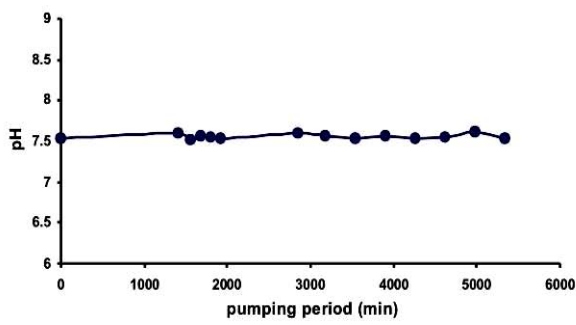
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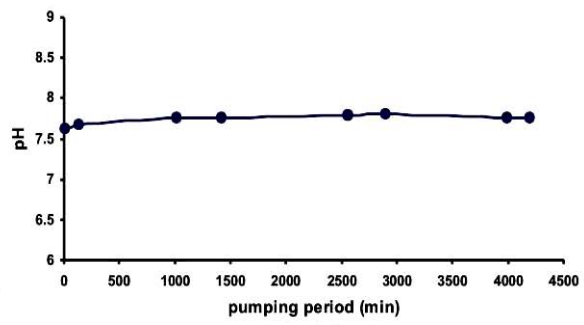
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Pw37

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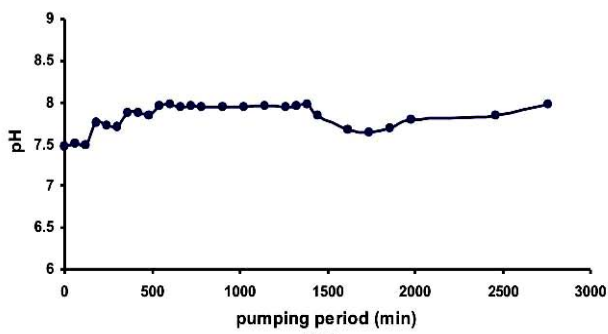


Pw35

pH

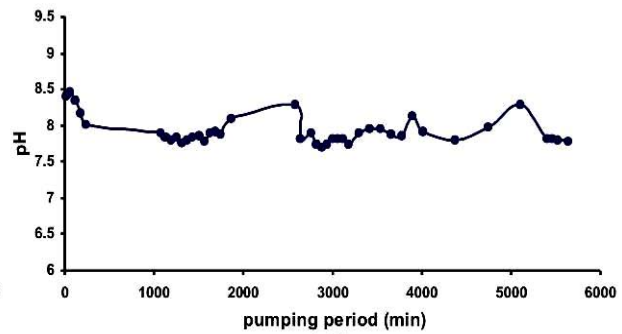
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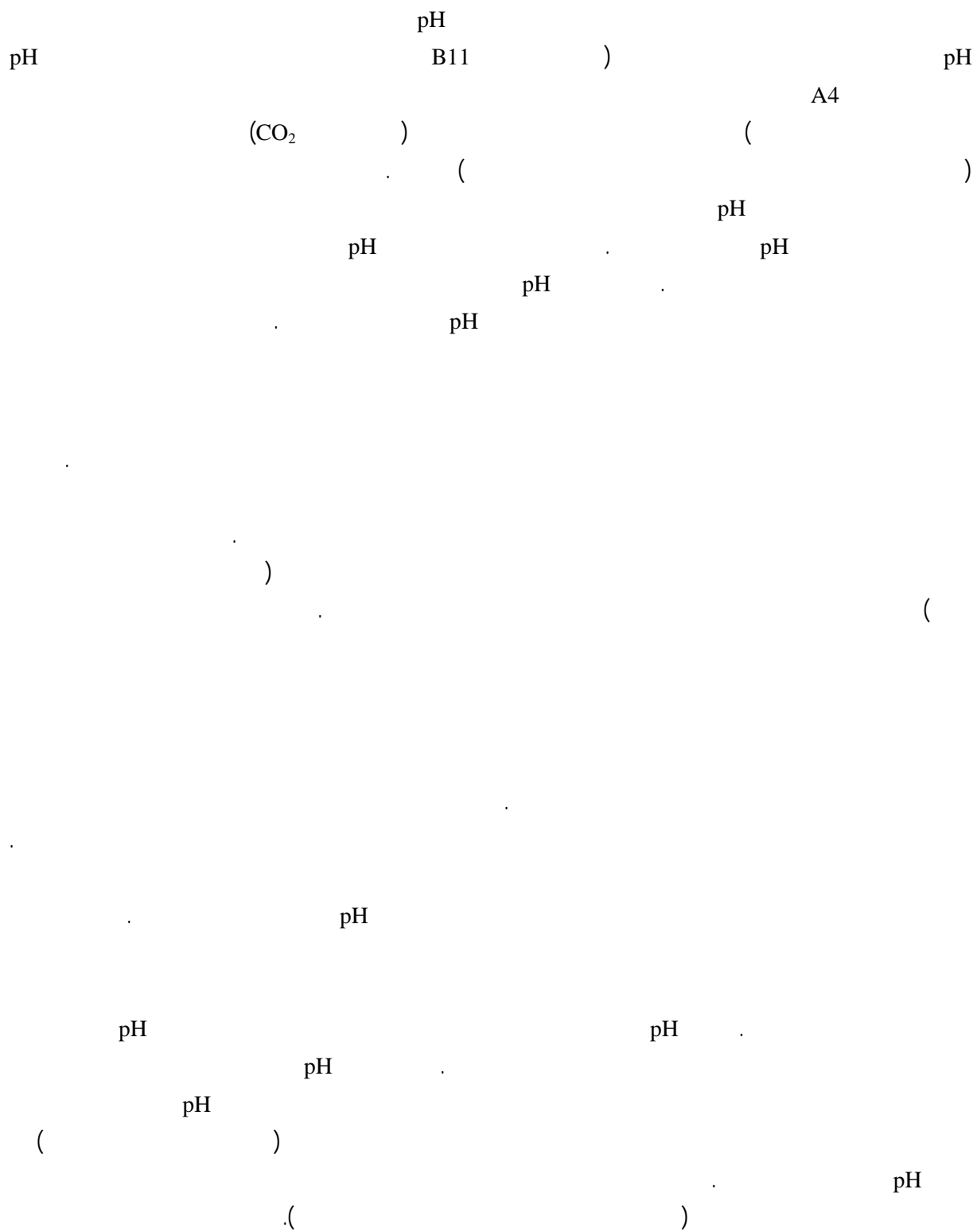
A21

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A15

pH



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Error! Reference source not found. Karami, G.H.; 2002; *Assessment of heterogeneity and flow systems in karstic aquifers using pumping test data*, PhD. Thesis, Univ. of Newcastle, Newcastle upon Tyne, U.K., 183 p.

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