

عنوان مقاله:

Application of the Cylindrical Model to Predict Subsidence at Ngatamariki Geothermal Plant, New Zealand

محل انتشار:

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خلاصه مقاله:

Geothermal energy is one of the clean energies which is used by several countries in the world for the generation of electricity. However, geothermal energy plants have some environmental effects such as air and noise pollutions and subsidence.

In this study, a cylindrical model was developed to predict subsidence at Ngatamariki geothermal plant, New Zealand. The location of the Ngatamariki geothermal field is about ۱۷ km off the north east of Taupo An extensive program of drilling, testing and modeling was carried out for knowing the likely response of the field to the subsidence. A graphic program using Delphi high-level programming was developed to predict the subsidence. The results of the study show that the predicted subsidence has an agreement with the predicted data from other researches. A sensitivity analysis was carried out which the results showed the thermal expansion coefficient has a significant effect on increasing subsidence.

کلمات کلیدی:

Subsidence, Ngatamariki geothermal plant, Cylindrical model, Geothermal energy, Environmental effect

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