

## Temperature Uncertainty Modeling with Proxy Structural Data as Soft Geostatistical Constraints for Well Siting at Granite Springs Valley

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Abstract: Utilizing existing temperature and structural information around Granite Springs Valley, Nevada, we build 3D stochastic temperature models, with the aim of evaluating our 3D uncertainty of temperature. 3D geostatistical analysis produces equally likely temperature models that reproduce the temperature measurements and adhere to the inferred spatial correlations. From these stochastic results, we calculate Vprior (\$) and entropy (-). In general, candidate locations that are located down dip from existing temperature logs had greater Vprior and lower entropy measurements. These two metrics were useful to balance the two objectives of locating high temperatures and increasing the information and knowledge with the new thermal gradient wells at Granite Springs Valley.