

## **A 2D HYDROTHERM Model of the Utah FORGE Site**

**Shashank Tiwari<sup>1</sup>, Stuart Simmons<sup>1,2</sup> and John McLennan<sup>1,2</sup>**

**<sup>1</sup>Department of Chemical Engineering, University of Utah, Salt Lake City, Utah, USA**

**<sup>2</sup>Energy and Geoscience Institute at the University of Utah, Salt Lake City, Utah, USA**

[shashank.tiwari@utah.edu](mailto:shashank.tiwari@utah.edu), [ssimmons@egi.utah.edu](mailto:ssimmons@egi.utah.edu), [jmclennan@egi.utah.edu](mailto:jmclennan@egi.utah.edu)

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### **ABSTRACT**

The Utah FORGE site is located to the west of Roosevelt Hot Springs in southern Utah. A simplified 2D model has been developed using the HYDROTHERM software to understand the hydrology and heat flow regime at the FORGE site. Specifically, we are aiming to resolve the size and nature of the deep heat source and to evaluate the role of the Opal Mound fault. To do this, model runs were constructed along an east-west slice extending 30 km across down to 10 km depth. Grid spacing is approximately 750 m (x) and 250 m (z) in the model with fine grids used near the pluton. A pluton 0.5 km across and 3 km high is the source of anomalous heat. The run responses are compared to the isotherms of temperatures, and the results show the importance of the Opal Mound Fault as a barrier to hydrothermal fluid flow.