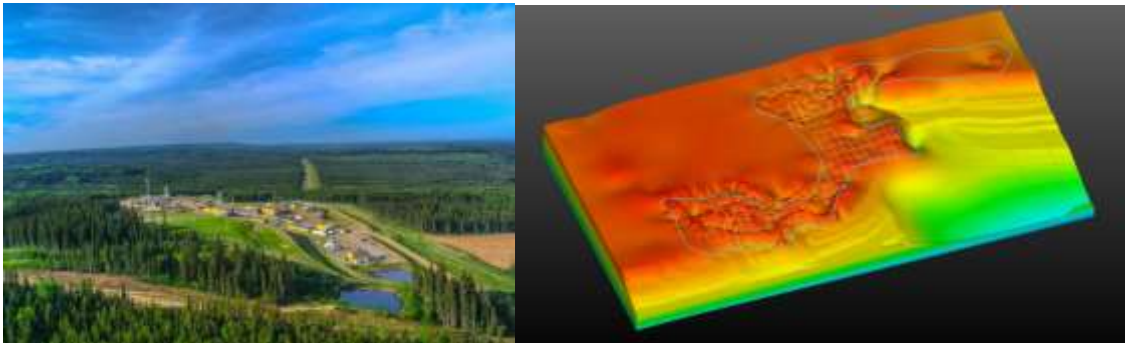


presents

Development of Sedimentary Heat Geothermal: The Current Boom in Canada

Dr. Matt Minnick, RESPEC

Low temperature (<150°C) sedimentary geothermal resources are widespread in North America. Despite many of the sedimentary basins containing viable geothermal resources there has been minimal commercial development. The picture is rapidly changing in Canada with new grant funding from the Natural Resources Canada renewable energy programs. RESPEC is leading the subsurface engineering on three of six major geothermal development projects in Canada. The DEEP Earth Energy Corp. in southern Saskatchewan is targeting the Deadwood Formation sandstones in the Williston Basin at a depth of 3400 meters to generate geothermal power. The Clarke Lake Geothermal Development Partnership, a collaboration of First Nations is developing a geothermal power project at the Clarke Lake gas field near Fort Nelson, British Columbia. RESPEC is conducting a feasibility study for Qulliq Energy Corp (QEC) in the Territory of Nunavut to help small isolated communities in the far north reduce their reliance on diesel generated power and heating oil. An 800-meter-deep temperature gradient hole will be drilled at the community of Baker Lake in the Canadian Shield to test for radiogenic heat generation, and thermal properties of the rock below the thick permafrost for design of an Enhanced Geothermal System (EGS). Additional feasibility studies are being conducted for the communities of Cambridge Bay and Resolute Bay in the Arctic Basins.



Dr. Matthew Minnick is RESPEC's Geothermal Subject-Matter Expert and Program Manager. He has 14 years of experience in geological engineering focused on geothermal resource assessment, subsurface-flow modeling, three-dimensional (3D) earth modeling, advanced GIS applications, and geohydrology. His geothermal experience ranges from traditional high-enthalpy systems in the Taupo Volcanic Zone of New Zealand and volcanic arc systems in Colombia, South America, to low-enthalpy sedimentary heat reservoirs and direct-use applications in Canada.

Dr. Minnick earned his BS and MS in Geological Engineering from South Dakota Mines and his PhD in Geological Engineering with a minor in Computer Science from the Colorado School of Mines.

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