



EVAN RENAUD

STAFF GEOLOGIST

TECHNICAL EXPERTISE

- / 3D Reservoir Modelling
- / Core Logging
- / Simulating Flow in Heterogeneous Media
- / Stochastic and Deterministic Porosity and Permeability Modelling
- / Reservoir Characterization

EDUCATION

- / MS in Geology, University of Alberta, Edmonton, AB, Canada (2020)
- / BS in Geology, University of Alberta, Edmonton, AB, Canada (2014)

PROFESSIONAL MEMBERSHIPS

- / Association of Professional Engineers and Geoscientists of Alberta, Member in Training (APEGA)
- / Canadian Society of Petroleum Geologists (CSPG)
- / American Association of Petroleum Geologists (AAPG)

CERTIFICATIONS & TRAINING

- / Workplace Hazardous Materials Information System (WHMIS) (2019)

HONORS & AWARDS

- / Perfect Score on Engineer Development Program (EDP) Final Test, Baker Hughes (2015)

WORK HISTORY

- / RESPEC (2019–Present)
- / Baker Hughes Canada (2015)
- / Nexen Inc. (2014)
- / Anthill Resources Ltd. (2013)

OVERVIEW

Evan Renaud is a hardworking geologist with experience in investigating subsurface porosity and permeability variation within conventional and unconventional sedimentary reservoirs through technical field positions, office roles, and university research. In his master's degree, Evan focused on applying these learnings to the geothermal industry and assessing the feasibility of repurposing a mature gas field into a source of geothermal power. His other focus was providing a reservoir characterization through core description, rock sampling, mapping, and simulating the flow of hot water within a hydrothermal dolomite reservoir, which allowed for a more robust understanding for myself and others of how to model a geothermal system.

PROJECT EXPERIENCE

Nunavut Geothermal Project, Qulliq Energy Corporation, Nunavut, Canada. Working in a geothermal resource characterization role, Evan is responsible for identifying potential, sedimentary-hosted, geothermal reservoirs within the Arctic Basin. His focus is the sedimentary strata in the Rolute Bay and Cambridge Bay areas. Evan has assessed oil and gas data, including porosity, permeability, temperature, and well logs along with regional structures and depositional patterns described from previously published literature to delineate prospective rock formations for geothermal fluid production.

Clarke Lake Geothermal Project, University of Alberta, Fort Nelson, British Columbia, Canada. Evan worked on his master's degree in geology for the past 3 years, which involved characterizing a carbonate reservoir and simulating water flow through the reservoir to prove the viability of repurposing oil and gas fields into sources of geothermal power. His main responsibilities were mapping the extent of dolomite existing in the Slave Point Formation using core and well logs and sampling the reservoir for porosity and permeability. He conducted flow simulations using the sampled porosity and permeability as inputs to assess how the dolomite's heterogeneity affects thermal breakthrough over 25 years of injecting and producing hot formation fluid.

Well Intervention via Coiled Tubing Projects; Shell Canada, Husky Energy, and Several Other Oil and Gas Operators; Alberta and British Columbia, Canada. As a field engineer working with Baker Hughes Canada, Evan was the on-site technical representative for several remote oil and gas projects across western Canada. His project details varied and were well articulated, with some projects requiring 1 day of work cleaning out a wellbore or implementing artificial lift and some projects lasting 2 weeks and requiring milling, cleaning, and setting packers within the wellbore. He is familiar with the logistics involved in allocating the proper work crew and field equipment for remote jobsites.

Kinosis Oil Sands Project, Nexen Inc., Calgary, Alberta, Canada. Evan was a student geologist working on porosity and permeability variation in oil sands reservoirs with a multidisciplinary team of geologists, geophysicists, and engineers. He helped to develop more realistic steam-assisted gravity drainage simulations by measuring clay content in core samples and comparing them to a petrophysical-based facies model. He worked directly with a supervisor who gave strict guidelines on project details, completion dates, and outcomes over a temporary 8-month work term.

Nadaleen Trend Gold Exploration Project, Anthill Resources Ltd., Mayo, Yukon, Canada. Evan worked as a junior geologist in a remote, temporary camp located 2 hours east (by plane) of Mayo, Yukon, near the Northwest Territories border. His duties were diverse and included technical aspects, manual labor, and managerial duties. His main responsibilities were core logging along with prospecting and sampling rocks and/or soil for gold in areas surrounding the camp. Prospecting was often done solo or in two-



person teams, arriving and leaving by helicopter. Evan's other tasks involved construction of wooden tent pads, washrooms, and various other camp utilities. He was also responsible for the timely shipment of core samples from the remote camp to a lab in Whitehorse, Yukon.

PUBLICATIONS & PRESENTATIONS

Banks, J., A. Rabbani, K. Nadkarni, and E. Renaud, 2020. "Estimating Parasitic Loads Related to Brine Production From a Hot Sedimentary Aquifer Geothermal Project: A Case Study From the Clarke Lake Gas Field, British Columbia," *Renewable Energy*, Vol. 153, pp. 539–552.

Renaud, E., N. Harris, J. Banks, and J. Weissenberger, 2019. "Geothermal Resource Characterization of the Middle Devonian Slave Point Formation at Clarke Lake Field, Fort Nelson, B.C., Canada," presented at the *2019 GeoConvention*, Calgary, AB, Canada, May 11–13.

Renaud, E., N. Harris, J. Banks, and J. Weissenberger, 2018. "Geothermal Resource Characterization of the Middle Devonian Slave Point Formation at Clarke Lake Field, Fort Nelson, British Columbia, Canada," presented at the *AAPG 2018 AAPG Annual Convention and Exhibition*, San Antonio, TX, United States, May 20–23.