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Rationale

Low-temperature geothermal energy could reduce the need of diesel or oil for heating in remote Yukon, Canada.

The Duke River area in southwestern Yukon was identified due to its low Curie-point depth, proximity to the Denali fault, local topographic gradient, and an interest from Kluane First Nation.

- scarce areas.

Study Site

Geology

Yukon is Canada's northwestern-most territory. SW Yukon is located in the Canadian Cordillera and is composed of terranes that originated as sedimentary basin arc systems and microcontinents.

The distribution of terranes in SW Yukon is controlled by faults and shear zones that formed during and after accretion. The Cretaceous to present Denali fault locally increases bedrock permeability.

Social Context

This project takes place on the traditional territory of Kluane First Nation. Burwash Landing is a small community (<100) and the seat of Kluane First Nation government. The community primarily relies on diesel for electricity, and oil and biomass for heating.

Integrated Play Fairway Analysis



Figure 2: (A) Physical and (B) social parameters used in the geothermal favourability assessment.



A holistic approach towards the integration of geothermal energy in remote communities

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