



Strides for BC's Geothermal Industry, Tu Deh-Kah Geothermal on the Clarke Lake Site

September 2, 2021 – Fort Nelson, Unceded Treaty 8 Territory

Fort Nelson First Nation (FNFN) is pleased to share that the drilling of two full-size geothermal wells in the Clarke Lake field is now complete. One of the wells was developed by reentering and deepening an existing gas well, repurposing it for geothermal energy. With the two wells, a testing doublet will collect samples where brine is extracted through one well and injected back into the reservoir through the other. The testing phase will commence this fall; this includes a 30-60 day pump test period during which flow, temperatures, and water chemistry data will be collected. The Nation is a step closer to building one of Canada's first geothermal projects.

Early results confirm highly porous rock and that the temperatures in the geothermal reservoir are 120 degrees Celsius or more. Collecting samples will enable further characterization of the geothermal resource; the analysis includes pH, temperature, pressure, gas content and composition, rock porosity and permeability, brine composition, and more. This data will help inform the design phase of the geothermal facility and identify other economic opportunities the project could provide.

Clarke Lake Geothermal Project has now become "Tu Deh-Kah Geothermal"; Tu Deh-Kah translates into "Water Steam" in English. FNFN artist Kerissa Dickie, owner of AIR Communications, developed the logo to visually highlight the force of water and heat and how its energy can be directed and engineered to create power that will warm the community's homes. Kerissa consulted with Elders and FNFN community member Lynn Michel to develop the name chosen to best represent the traditional Dene territory. The project is on the Clarke Lake gas field in Northeastern BC — an Indigenous name is a step towards decolonizing the site's identity. Tu Deh-Kah Geothermal is an initiative of Deh Tai LP, Fort Nelson First Nation's economic development entity.

"Tu Deh-Kah Geothermal is a state of the art project that will revolutionize the North by creating opportunities for generations to come. Fort Nelson First Nation is pursuing this sustainable energy project to create a vibrant future for our people and our neighbouring communities." — Chief Gale of Fort Nelson First Nation, Chair of Deh Tai LP

Tu Deh-Kah Geothermal Logo Elements:

- Blue symbolizes the WATER in the geothermal brine, and the fluid that transforms into steam to generate electricity by passing through a turbine
- The flame represents the FIRE of heat radiating from the geothermal resource, while the brown dirt represents the EARTH
- The moosehide teepee is a nod towards direct use heating, where the geothermal facility can provide excess HEAT FOR HOMES and other applications like agriculture. The moosehide teepee also recognizes Fort Nelson First Nation's ties to cultural practices and connection to the land

Tu Deh-Kah Geothermal is estimated to be 7-15 MW in size, providing enough electricity to power approximately 10,000 homes. The Fort Nelson region is not connected with British Columbia's main



electric grid. The regional grid is 100% dependent on gas fired generation making the Fort Nelson grid 13 times more carbon intensive than BC's main grid. Raging forest fires makes it clear that mitigating climate change needs to be a core focus. Fort Nelson is on the front lines of climate change, experiencing the adverse impacts as a Northern community. Tu Deh-Kah Geothermal will utilize a highly efficient facility using Combine Cycle Organic Rankine Cycle technology, helping to reduce carbon emissions in the Northern Rockies and enabling Canada to reach its net-zero by 2050 targets. This 100% Indigenous-owned renewable energy project, Tu Deh-Kah Geothermal, continues to progress and will reach completion in early 2025.

Tu Deh-Kah Geothermal is thankful for the support of Canada's nascent geothermal energy industry and the contributions to this project: Natural Resources Canada's Emerging Renewables Power Program, Western Economic Diversification, Indigenous Services Canada, Province of BC's First Nations Clean Energy Business Fund and Western Economic Diversification Canada's partnership with New Relationship Trust on BC Indigenous Clean Energy Initiative.

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Visual assets can be [viewed here](#).

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