

Minosihtahk

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
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Advisor(s): Dr. Masud Khawaja

Topic Title: Opportunities for Decent Work and Indigenous Partnerships: Lithium in Alberta

Audience: CEO and the Board of Directors of LithiumBank Resources Corp. in Alberta

Sustainable Development Goal

SDG #8: Decent Work and Economic Growth

Executive Summary

Alberta has supported their economy through fossil fuels for many years. This industry has had controversies in regards to unethical actions towards the environment and indigenous communities. With the 2050 net-zero carbon emissions goal every auto manufacturer is moving towards hybrid and electric vehicles. Lithium is one of the minerals necessary to make the batteries for these vehicles and the demand for lithium is estimated to increase by 600% over the next seven years. Current practices of extracting lithium cause damage to land, freshwater, and include dangerous working conditions. Litigation with indigenous groups generally ends in favor of corporations but is costly. Despite nearby mineral deposits, many indigenous communities are normally comprised of lower income populations. These communities are more susceptible to mental illnesses, substance abuse, and obesity. For these reasons, environmentally and ethically sourced lithium is a rare commodity.

Minosihtahk is suggesting that LithiumBank Resources Corp. focus on the sustainable method of Direct Lithium Extraction (DLE). DLE maintains sustainability as the impact on the land and water is minor while other methods such as open pit mining and evaporation processes result in major damage to surrounding areas. Furthermore, it takes less time and produces higher purity which results in increased value and makes this process much more sustainable in the long term. Access to geothermal resources located nearby deep aquifer brines allows operations to meet power needs sustainably. By partnering with local indigenous communities through consultation and job opportunities, LithiumBank can avoid litigation, promote decent work, and adhere to the Truth and Reconciliation Calls to Action. Despite higher overall costs in both creation and operation of facilities, Alberta's lithium profit is competitive with that of Chile due to 54% lower royalties having to be paid. Furthermore, the federal government of Canada is providing incentives to mine lithium such as a 30% critical mineral exploration tax credit, \$40 million to support regulation and permitting, and \$1.5 billion to support critical mineral projects. Given our recommendations, Alberta has the opportunity to become a strong and sustainable mining region while including indigenous groups in this historic transition.