Northern Lithium secures rights to explore for and extract lithium from hot saline brines within the Weardale Granite of County Durham

Durham, Thursday 11 February 2021 - Northern Lithium Ltd today announces the launch of its inaugural lithium development project in the North East of England, having recently secured the rights and entered into definitive mineral rights agreements to explore for, and extract, lithium and other minerals contained in underground hot saline brines, already known to exist within the Weardale Granite of County Durham.

Previous studies of the groundwater within the Weardale Granite have identified that lithium is present at sufficiently high concentration to consider the potential for commercial production. Locally sourced lithium, as a raw material product, in the manufacture of lithium-ion batteries, will be essential to meet the supply chain requirements of the rapidly growing market for electric vehicles and for power storage in the UK and Europe.

With major economies like the US, China and the EU joining the UK in committing to reach net zero by 2050, the demand for batteries and battery storage is set to soar. A secure and sustainable domestic supply of lithium will support the production of batteries with a lower carbon footprint, boost the local economy and provide a much-needed incentive for battery manufacturers to build factories here in the UK.

If successful, the project could ultimately establish the North East of England as a new centre of lithium production and provide a further economic boost to the region following the recently announced plans to expand lithium-ion battery manufacturing in the North East.

The rights secured by Northern Lithium, are the result of a three-year discussion and negotiation process with a minerals rights owner. Northern Lithium will now begin its exploration programme, initially through a data-based exercise to identify target areas along the historically mined Slitt and Red Veins, with physical exploration and commercial extraction only commencing once extensive local consultation, design, statutory planning and environmental consent steps have been completed.

In recent years, a number of other companies in Cornwall, the USA, France and Germany have sought to exploit lithium and other mineral extraction from similar saline fluids and progress in this area has been helped by the development of new mechanical filtration technology, helping reduce the costs and environmental footprint of lithium production when compared to the outputs from traditional sources like Chilean and Argentinean salars. In terms of the local area itself, each Weardale production site will likely comprise extraction and reinjection wells with a lithium production facility built between them. Part of the next evaluation and design phase of the project will determine the suitability of different production plants but various small-scale off-the-shelf options that fit into a container are available. To further minimise environmental impact, the extraction process itself will be designed to be as closed loop as possible, with the residue waters re-injected back into the groundwater after lithium has been extracted.

Nick Pople, Managing Director of Northern Lithium, commented:

“Establishing a homegrown supply of lithium here in County Durham will be essential to accelerate the transition to electric vehicles, achieve the UK Government’s ten-point plan and make significant progress in reaching our net zero commitments by 2050. We’re delighted to launch this project so that exploration can get underway. If successful, not only will it reactivate mining and minerals extraction in the local area, the North East has the potential to become a core centre of lithium-ion battery and electric vehicle manufacturing using locally sourced raw materials, bringing jobs and economic growth to the region.”

Roger Bade, Technical Director of Northern Lithium, said:

“I am excited to be part of Northern Lithium and this specific project, having extensively studied the Northern Pennine Orefield and associated mining and mineral extraction opportunities for over 40 years, since I was a mining student at the Royal School of Mines, Imperial College in 1981. If successful with this particular lithium project, we have the opportunity of writing a new chapter in the 1,000 year history of mineral extraction in the region whilst introducing modern sustainable extraction methods to maximise efficiency of lithium extraction from the saline brines, ensure low footprint areas for extraction and minimise environmental impact to the local area.”

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NOTES TO THE EDITORS

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About Northern Lithium

Northern Lithium is a private company established to develop, in a sustainable and environmentally responsible way, lithium in geothermal "hot saline brines" extraction opportunities with an initial focus on the Weardale Granite of County Durham. The directors and major shareholders of Northern Lithium bring a blend of extensive mining and mineral extraction industry experience, local area knowledge and fundraising expertise. The Company has secured agreements with a mineral rights owner over an area of approximately 185 sq km of Weardale, County Durham to explore for, and to commercially develop, lithium bearing saline brines in areas considered to be highly prospective. The Company believes this could result in the establishment of a new centre of lithium production in the North East of England.

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Lithium

Lithium is a major component of lithium-ion batteries which power electric vehicles (EVs) and energy storage devices. It has been said that as the world responds to climate change and replaces the internal combustion engine, lithium is the metal of tomorrow. With forecasts suggesting Europe will need up to 18 times more lithium by 2030 and up to 60 times by 2050, the EU recently updated its list of 30 "Critical Raw Materials" adding lithium to the list for the first time. Backing of the UK's car manufacturing bases, including the North East of England, to accelerate the transition to electric vehicles, as well as transforming the UK's national infrastructure to support electric vehicles is one of the key elements of the recently announced British Prime Minister, Boris Johnson's ten-point plan for the UK's green recovery and an important step to a Net Zero economy by 2050. The UK Government has defined lithium as a metal of strategic importance to the country and it is considered vital that new and more local sources of lithium are developed to enable secure access to the projected levels of lithium required, particularly given the majority of what is produced today comes from South America, Australia and China. The UK Government is concerned about

potential impacts of relying on imports of key raw material as well as lengthy supply chains and the current Covid-19 pandemic has highlighted further the need to prioritise the development of a domestic supply of lithium for the UK. There is also wide concern over the current carbon footprint to import lithium from existing supply chain markets and it is a stated priority of the UK government to reduce this carbon footprint through the promotion of domestic extraction and production of lithium.

Lithium in County Durham

The presence of lithium in hot saline brines in the Weardale Granite, County Durham has been known for some time, evidenced initially through the presence of saline geothermal water and high concentrations of lithium in mine water from a local fluorspar mine. This was further confirmed by the testing of groundwaters extracted from a nearby geothermal project where the presence of a deep aquifer with the potential for use as a geothermal source of renewable energy, was established by drilling and testing carried out in 2004-2006, and interpretation and analysis ongoing to 2010. The chemical analysis of samples obtained from both the fluorspar mine and the geothermal project indicate lithium concentrations at an economically viable grade. Further, the drilling and testing results provide evidence that the granite in the mineralised veins has a high permeability, which will allow for large and economically feasible flow rates required for commercial lithium processing and production. The original geothermal project obtained planning permission in 2002 but was unable to raise sufficient funding at the time to commercialise initial findings. Whilst the previous focus was just on the geothermal energy prospects, new technology and extraction methodologies developed in recent years now offer the additional potential to extract lithium from these hot saline brines.