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Website: www.smartexploration.eu

Nordic Iron Ore and SkyTEM Surveys will perform a Helicopter-based deep penetrating TEM (transient electromagnetic) geophysical survey in the Ludvika area within the Smart Exploration project.

The testing and validation of the Helicopter-based deep penetrating TEM will have the support of Nordic Iron Ore AB, a mining partner of the Smart Exploration project. Nordic Iron Ore AB is a mining development company that aims to resume and develop iron ore production at Ludvika Mines in Blötberget and Håksberg and to develop the intermediate Väsman iron field. The Company has all the necessary permits in place for the mine in Blötberget and will be able to produce iron ore of the highest qualities from significant mineral resources.

The Blötberget and Håksberg iron oxide deposits are located in the historic Bergslagen Mining District where mining activities have been recorded since the 1600's. Modern underground mining at Blötberget began in the 1900's and ceased in 1979 due to low commodity prices. Nordic Iron Ore acquired the Ludvika mines property in 2008 advancing the property toward a restart with renewed exploration suggesting that mineralization may extend significantly deeper to over 1,000 m.

The survey will take place from June 14th to June 20th, and the base operations will be at Ludvika airport. The helicopter will fly along the lines shown on the map below. The helicopter will carry a geophysical array in a towing system beneath the helicopter, which will fly with a speed between 60 and 80 kph along the lines. The geophysical array will be around 30 to 40 m above the ground, while the helicopter itself at around 80 m above the ground. The helicopter will fly for approximately 2.5 hours on each flight over an area of between 100 and 200 m.

The geophysical system works like a big 3D-scanner of the ground using the same physical concepts as the MR-scanner at the hospitals. The electromagnetic field transmitted by the geophysical system does not pose any risk to the public. The field strength is less than that transmitted by an electrical train.

The Smart Exploration project is designed to address the challenges associated with the exploration of mineral resources that are vital to the economy and technological progress within the EU. The project mainly focusses on the development of cost-effective, environmentally-friendly tools and methods for geophysical exploration in very challenging brownfield areas. The project has officially started on 1st of December 2017 and has a planned duration of 36 months. The project has been allocated a budget of just over € 5.2 million under grant agreement No. 775.971. More information about the project can be found at www.smartexploration.eu , YouTube channel and LinkedIn.

Since this project is publicly funded, we have social duty to inform public and inspire young generations wherever and whenever possible. This is why the project team is keen to invite the local community, students and civil society organizations to joining the survey. This will be a great moment to demonstrate how technical disciplines contribute to our modern lives and would inspire young generation pursuing technical paths.



new ways to explore the subsurface

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