

Geophysical Survey

The Tellus Border geophysical programme includes an airborne survey, ground-based case studies and desk-based data interpretation. Key to the airborne survey is a small twin-propeller aircraft equipped with the latest geophysical instruments, measuring electrical conductivity, magnetic field and natural radioactivity of soil, rocks and groundwater.

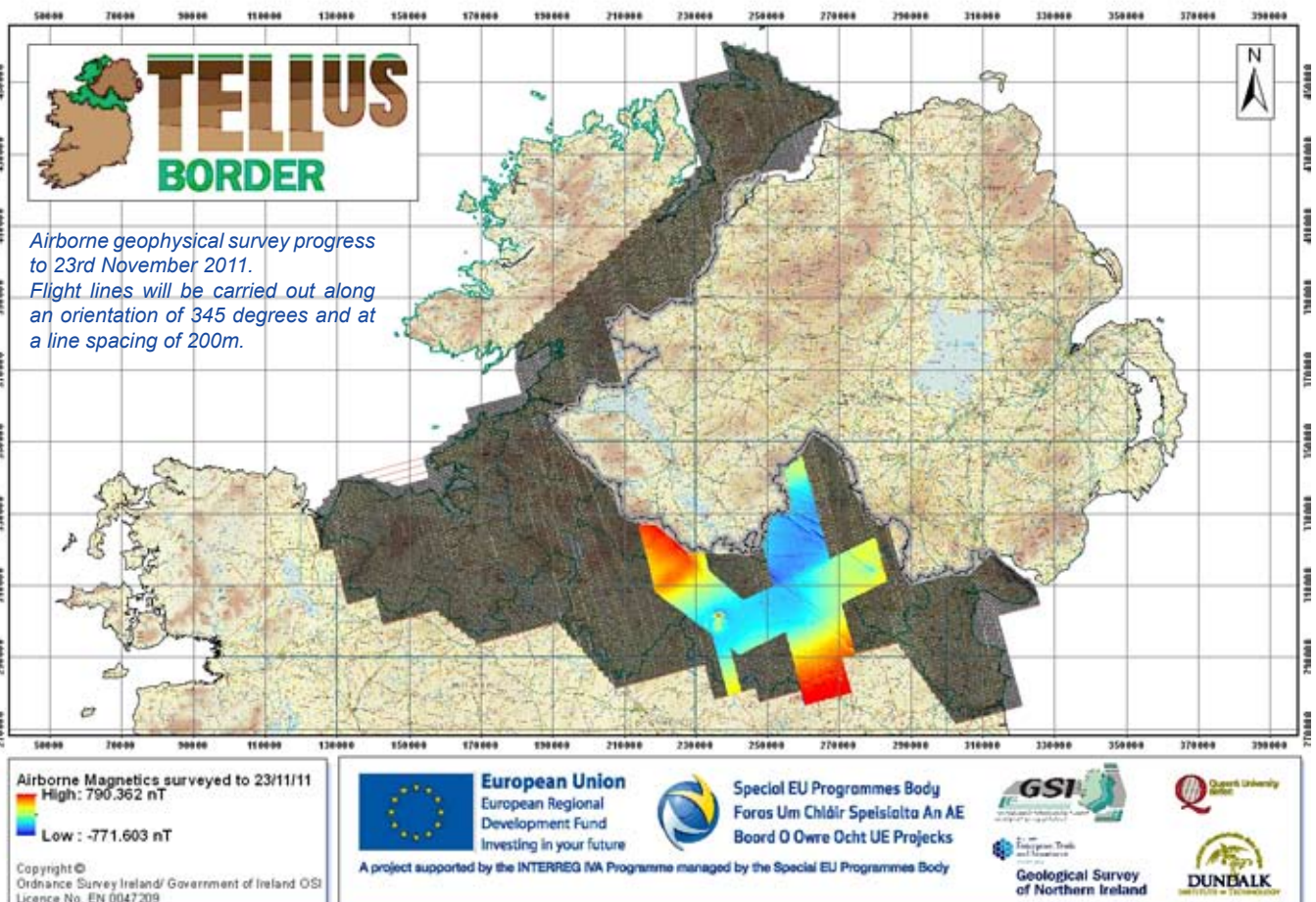


Project Geophysicists Mohammednur Desissa (right) and James Hodgson (left) with the survey plane in Enniskillen St. Angelo airport.

Owned and operated by the Canadian specialist, Sander Geophysics, the plane landed at its base at St Angelo airport, Enniskillen on 17 Sept 2011. After a period of test flights, the airborne survey got 'off the ground' on 26th October when the first production lines were

flown over Co. Cavan, overseen by project geophysicists Mohammednur Desissa and James Hodgson. In 2012 the survey will continue over counties Sligo, Leitrim, Cavan,

Monaghan and Louth, as well as parts of Donegal, Mayo, Roscommon, Longford and Meath.



By 19th December 2011, the aircraft had successfully completed 10,592 no. line kilometres in counties Cavan, Monaghan and Louth. Its progress can be viewed on the project website www.tellusborder.eu.

The aircraft flies at an altitude of 60m above ground level in order to collect the most accurate geophysical information. As it passes overhead it is similar to the sound of a lorry and has the potential to startle sensitive animals. As such, the Tellus Border team has been working hard to ensure animal owners, horse breeders and the agri-community

are aware of the project. Addressing public concerns and making suitable arrangements for the safety of animals with potential to be affected by a low-flying survey is a priority for mapping and database manager Shane Carey who logs all queries from his base at GSI. *"Minimising disruption to activities on the ground is a must. Our aim is to work with local people so that they can bring their animals indoors on the day of the survey or if this proves impossible we can fly at greater height over their land,"* said Shane Carey, project GIS and data manager.

In addition to the airborne survey, work continues on the

interpretation data from existing surveys completed across Northern Ireland and counties Cavan and Monaghan. Earlier this year the geophysical team also carried a number of ground-resistivity and seismic refraction surveys to assist in the processing and interpretation of the airborne data.

Geophysical survey data will be interpreted next year which will have a range of useful applications e.g. improving geological mapping, assessing radon levels, estimating soil carbon and modelling peat depth and detecting groundwater pollution plumes.

Shane Carey assists with a geophysical survey in Co. Cavan.

