

Tellus Border project

Data Usage Terms and Conditions and Geophysics Metadata

Version 1

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Northern Ireland joint report

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Geological Survey of Ireland

The Geological Survey of Ireland is responsible for providing geological advice and information, and for the acquisition of data for this purpose. GSI produces a range of products including maps, reports and databases and acts as a knowledge centre and project partner in all aspects of Irish geology. GSI is a division of the Department of Communications, Energy & Natural Resources (DCENR).

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The Geological Survey of Northern Ireland is part of the Department of Enterprise, Trade and Investment (DETI). GSNI provides geoscience information and services to inform decision making, promote economic development and assist environmental management in Northern Ireland.

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The Tellus Border project

Tellus Border is a geoenvironmental mapping project which provides data on soils, waters and rocks across the border region of Ireland and integrates these with existing data in Northern Ireland. This cross-border collaboration between the Geological Survey of Ireland, the Geological Survey of Northern Ireland and research partners supports the assessment of natural resources, sustainable environmental management and improvement of geological mapping on the island of Ireland. For more information on Tellus Border please see www.tellusborder.eu.

Tellus Border is funded by the INTERREG IVA development programme of the European Regional Development Fund, which is managed by the Special EU Programmes Body (SEUPB). The SEUPB is a North/South Implementation Body sponsored by the Department of Finance and Personnel in Northern Ireland and the Department of Finance in Ireland. It is responsible for managing two EU structural funds Programmes PEACE III and INTERREG IV designed to enhance cross-border co-operation, promote reconciliation and create a more peaceful and prosperous society. For more information on the SEUPB please visit www.seupb.eu.

Tellus Border is additionally part funded by the Department of Environment, Community and Local Government in Ireland and the Department of the Environment in Northern Ireland.

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Change record

Date	Author	Version	Details
31 st January 2013	Scanlon, R.P. and McGinn, C.	Version 1	Terms and conditions for Tellus Border data. Geophysics metadata.

Executive Summary

This report describes the terms and conditions for the use and downloading of Tellus Border data and geophysical metadata.

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1 Data usage terms and conditions

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2 Geophysics Metadata

2.2 Magnetics

1. Data set name: Magnetic Anomaly

2. Abstract: Magnetic Anomaly map in nano-Tesla. Recorded at 10 Hz, along survey lines orientated 165 degrees and line spacing of 200m at a survey altitude of 59 m. Data is gridded using a minimum curvature algorithm. Data is diurnally and IGRF corrected and control line levelled. Data is gridded using a minimum curvature algorithm. Different datasets

grids were stitched together using the Geosoft suture method and then re-sampled to a master database. Data is recorded in Irish National Grid and latitude and longitude.

3. Purpose: Allows detailed variations in Earth's magnetic field due to geological differences to be mapped.

4. Descriptive words:

5. Constraints: Data is gridded using 50m cell size. Data is not decultured and therefore spikes from cultural noise are still present.

6. Temporal Extent: Tellus Border area (ROI) merged in December 2012 from two datasets (a) Tellus Border data collected October 2011-July 2012 and (b) Cavan (2006).

Data Formats: file.xyz , Geosoft format

Lineage: Airborne geophysics Data.

2.3 Potassium

1. Data set name: Potassium

2. Abstract: Potassium map in percentage potassium. Recorded at 1 Hz, along survey lines orientated 165 degrees and line spacing of 200m at a survey altitude of 59 m. Data is fully corrected and gridded using a minimum curvature algorithm. Different datasets were assessed and correction factors applied to allowing merging of data. All data was corrected to the most recent dataset. Data was stitched together using the Geosoft suture method, then re-sampled to a master database. Data is recorded in Irish National Grid and latitude and longitude.

3. Purpose: Allows detailed variations in natural potassium radiation due to geological differences to be mapped.

4. Descriptive words:

5. Constraints: Data is gridded using 50m cell size. Data recorded at altitudes greater than 240 m is deemed as potentially erroneous.

6. Temporal Extent: Tellus Border area (ROI) merged in December 2012 from two datasets (a) Tellus Border data collected October 2011-July 2012 and (b) Cavan (2006).

7. Data Formats: file.xyz , Geosoft format

8. Lineage: Airborne geophysics Data.

2.4 Thorium

1. Data set name: equivalent Thorium

2. Abstract: Thorium map in parts per million. Recorded at 1 Hz, along survey lines orientated 165 degrees and line spacing of 200m at a survey altitude of 59 m. Data is fully corrected and gridded using a minimum curvature algorithm. Different datasets were assessed and correction factors applied to allowing merging of data. All data was corrected to the most recent dataset. Data was stitched together using the Geosoft suture method, then re-sampled to a master database. Data is recorded in Irish National Grid and latitude and longitude.

3. Purpose: Allows detailed variations in equivalent natural Thorium radiation due to geological differences to be mapped.

4. Descriptive words:

5. Constraints: Data is gridded using 50m cell size. Data recorded at altitudes greater than 240 m is deemed as potentially erroneous.

6. Temporal Extent: Tellus Border area (ROI) merged in December 2012 from two datasets (a) Tellus Border data collected October 2011-July 2012 and (b) Cavan (2006).

7. Data Formats: file.xyz , Geosoft format

8. Lineage: Airborne geophysics data.

2.5 Uranium

1. Data set name: equivalent Uranium

2. Abstract: Uranium map in parts per million. Recorded at 1 Hz, along survey lines orientated 165 degrees and line spacing of 200m at a survey altitude of 59 m. Data is fully corrected and gridded using a minimum curvature algorithm. Different datasets were assessed and correction factors applied to allowing merging of data. All data was corrected to the most recent dataset. Data was stitched together using the Geosoft suture method,

then re-sampled to a master database. Data is recorded in Irish National Grid and latitude and longitude.

3. Purpose: Allows detailed variations in equivalent natural Uranium radiation due to geological differences to be mapped

4. Descriptive words:

5. Constraints: Data is gridded using 50m cell size. Data recorded at altitudes greater than 240 m is deemed as potentially erroneous.

6. Temporal Extent: Tellus Border area (ROI) merged in December 2012 from two datasets (a) Tellus Border data collected October 2011-July 2012 and (b) Cavan (2006).

7. Data Formats: file.xyz , Geosoft format

8. Lineage: Airborne geophysics Data.

2.6 Ternary Image

1. Data set name: Ternary Image (Combined K, Th & U)

2. Abstract: Map image created by combining Potassium (red), Thorium (green) and Uranium (blue) data together to form single image. The strength of the three different colours reflects the prominence of the three different components. A white colour indicates high values in all three components and black and absence of all three components.

3. Purpose: Map highlights variations in the different concentration in Potassium (K), Thorium (Th) and Uranium (U) due to variations in near surface soil and rock geology.

4. Descriptive words:

5. Constraints: Data is gridded using 50m cell size. Data recorded at altitudes greater than 240 m is deemed as potentially erroneous.

6. Temporal Extent: Tellus Border area (ROI) merged in December 2012 from two datasets (a) Tellus Border data collected October 2011-July 2012 and (b) Cavan (2006).

7. Data Formats: file.xyz , Geosoft format

8. Lineage: Airborne geophysics data.

2.7 Total Count

1. Data set name: Total Count
2. Abstract: Total count map in counts per second. Recorded at 1 Hz, along survey lines orientated 165 degrees and line spacing of 200m at a survey altitude of 59 m. Data is fully corrected and gridded using a minimum curvature algorithm. Different datasets were assessed and correction factors applied to allowing merging of data. All data was corrected to the most recent dataset. Data was stitched together using the Geosoft suture method, then re-sampled to a master database. Data is recorded in Irish National Grid and latitude and longitude.
3. Purpose: Measure of the total radioactive count between energy window 0.396 to 2.81 MeV.
4. Descriptive words:
5. Constraints: Data is gridded using 50m cell size. Data recorded at altitudes greater than 240 m is deemed as potentially erroneous.
6. Temporal Extent: Tellus Border area (ROI) merged in December 2012 from two datasets (a) Tellus Border data collected October 2011-July 2012 and (b) Cavan (2006).
7. Data Formats: file.xyz , Geosoft format
8. Lineage: Airborne geophysics data.