

## GTK DATA FORMAT DESCRIPTION / Kullaa

### XYZ Files

There is one Geosoft XYZ file corresponding to each survey method (magnetic, radiometric and electromagnetic measurements). The original coordinate system was based on Gauss-Krueger projection and central meridian of 21°E for zone 1 map sheets (KKJ1).

The survey line spacing was 100 meters and the flight direction 135° (clockwise from north). The flight altitude was 30 meters.

The measurement system specification was as follow:

| Aircraft:  | Magnetometers     |        |               | Electromagnetics  |                |          | Radiometrics  |                |          |
|------------|-------------------|--------|---------------|-------------------|----------------|----------|---------------|----------------|----------|
| Twin Otter | Magnetometrit     |        |               | Sähkömagneettinen |                |          | Radiometrinen |                |          |
| Year       | Sensors / Anturit |        | Registration  | Coil distance     | Frequency      | Moment   | Registration  | Crystal volume | Channels |
| Vuosi      | C=Cesium          |        | Tallennusväli | Kelaväli          | Taajuus        | Momentti | Tallennusväli | Kidetilavuus   | Kanavia  |
|            | Number of sensors | Sensor | (1/s)         | (m)               | (Hz)           | (Am*2)   | (1/s)         | (l)            | N:o      |
| 2003       | 2                 | C      | 10            | 21,36             | 3125/14<br>368 | 115/55   | 4/4           | 41<br>(33+8)   | 256      |

Electromagnetic coil configuration was vertical coplanar. Apparent resistivity and depth was calculated from primary EM components by a half-space model.

The files are named as follow:

APKULLEV.XYZ      apparent resistivity data  
EMKULLEV.XYZ      electromagnetic data  
MLKULLEV.XYZ      left wingtip magnetometer data  
MRKULLEV.XYZ      nose boom magnetometer data  
RAKULLEV.XYZ      radiometric data

### XYZ File Columns

Each row in these ASCII files corresponds to one measurement point. One column of the row corresponds to one measurement parameter.

The data includes the following columns:

#### Apparent resistivity data

X            Easting (meters)  
Y            Northing (meters)  
AR3        Apparent resistivity, 3 kHz (Ohm-m)  
AD3        Apparent depth to conductor, 3 kHz (m)  
AR14      Apparent resistivity, 12 kHz (Ohm-m)  
AD14      Apparent depth to conductor, 12 kHz (m)

### **Electromagnetic data**

|      |  |
|------|--|
| X    | Easting (meters)                                 |
| Y    | Northing (meters)                                |
| DAY  | Day number from the beginning of the year        |
| TIME | Measurement time stamp (hhmmss)                  |
| DIR  | Flight direction (degrees, clockwise from north) |
| RALT | Radar altitude (meters)                          |
| RE3  | In-phase component, 3 kHz (ppm)                  |
| IM3  | Quadrature component, 3 kHz (ppm)                |
| RE14 | In-phase component, 12 kHz (ppm)                 |
| IM14 | Quadrature component, 12 kHz (ppm)               |

### **Magnetic data**

|      |   |
|------|---|
| X    | Easting (meters)  |
| Y    | Northing (meters)   |
| DAY  | Day number from the beginning of the year                                   |
| TIME | Measurement time stamp (hhmmss)   |
| DIR  | Flight direction (degrees, clockwise from north)                            |
| RALT | Radar altitude (meters)   |
| MGCL | Total magnetic field of the left wingtip magnetometer at IGRF65 level (nT)  |
| MGCR | Total magnetic field of the right wingtip magnetometer at IGRF65 level (nT) |

### **Radiometric data**

|      |  |
|------|--|
| X    | Easting (meters)                                   |
| Y    | Northing (meters)                                  |
| DAY  | Day number from the beginning of the year          |
| TIME | Measurement time stamp (hhmmss)                    |
| DIR  | Flight direction (degrees, clockwise from north)   |
| RALT | Radar altitude (meters)                            |
| BALT | Barometric altitude (meters)                       |
| TOUT | Temperature outside the aircraft (°C)              |
| TOT  | Total radiation (ur –unit)                         |
| KAL  | Potassium concentration (% K)                      |
| URA  | Uranium concentration (ppm equivalent uranium eU)  |
| THO  | Thorium concentration (ppm equivalent thorium eTh) |