

GTK DATA FORMAT DESCRIPTION / Petäjäseltä

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 27°E for zone 3 map sheets (KKJ3).

The survey line spacing was 50 meters and the flight direction 90° (clockwise from north). The flight altitude was 30 meters.

The measurement system specification was as follow:

Aircraft:	Magnetometers			Electromagnetics				Radiometrics	
Cessna Caravan	Magnetometrit			Sähkömagneettinen				Radiometrinen	
Year	Sensors / Anturit		Registration	Coil distance	Frequency	Moment	Registration	Crystal volume	Channels
Vuosi	C=Cesium		Tallennusväli	Kelaväli	Taajuus	Momentti	Tallennusväli	Kideilavuus	Kanavia
	Number of sensors	Sensor	(1/s)	(m)	(Hz)	(Am*2)	(1/s)	(l)	N:o
2004	1	C	10	16.96	3020/14 368	50/18	4/4	41 (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:

APPETLEV.XYZ apparent resistivity data
 EMPETLEV.XYZ electromagnetic data
 MBPETLEV.XYZ back boom magnetometer data
 RAPETLEV.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)
MGCB	Total magnetic field of the back boom 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)