

GTK DATA FORMAT DESCRIPTION / Kaustinen

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 24°E for zone 2 map sheets (KKJ2).

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	Kidetilavuus	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:

APKAULEV.XYZ apparent resistivity data

EMKAULEV.XYZ electromagnetic data

MBKAULEV.XYZ back boom magnetometer data

RAKAULEV.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)