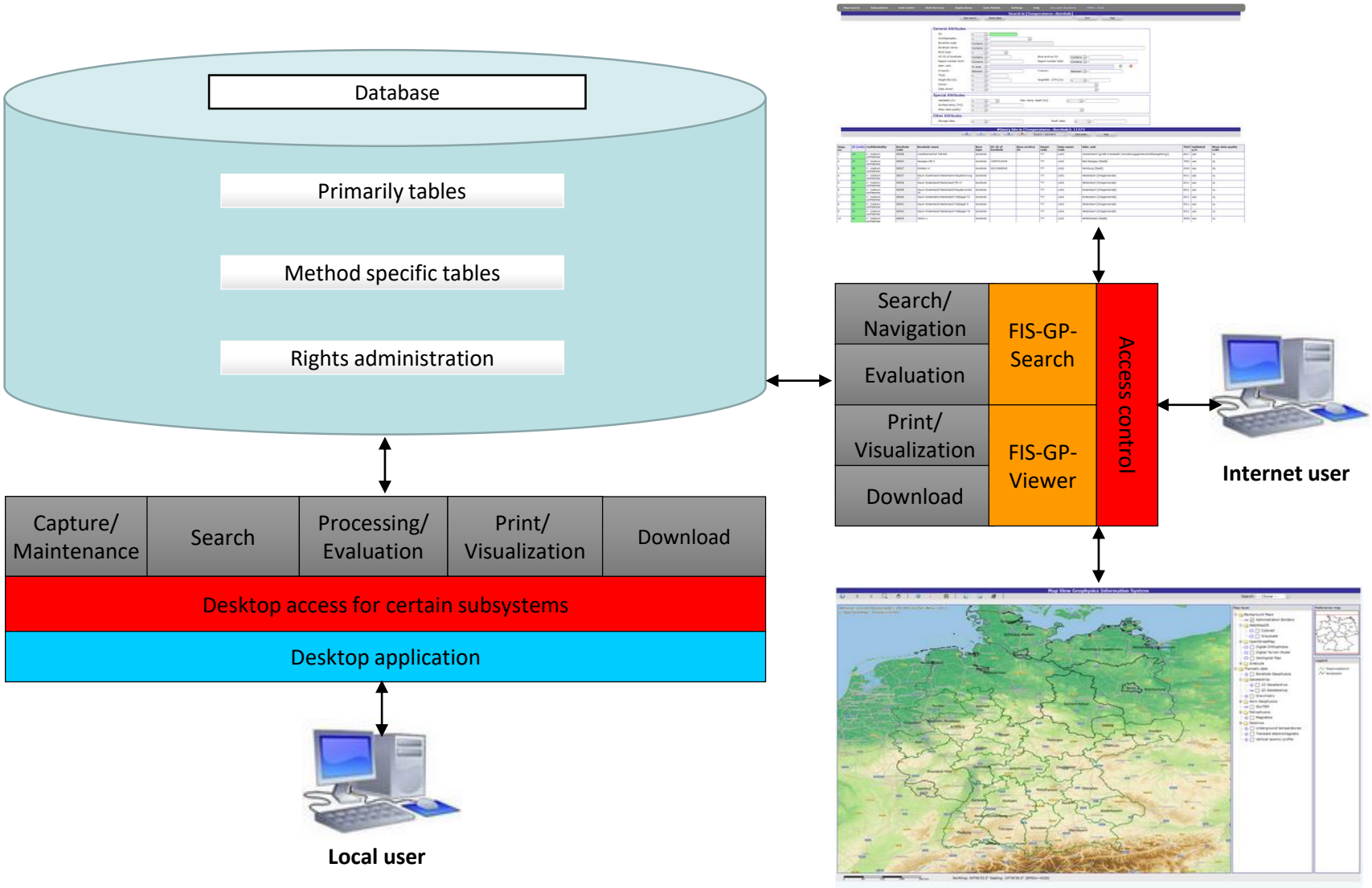
Tutorial for the Geophysics Information System with application examples

https://www.fis-geophysik.de

Introduction

- The ***Geophysics Information System*** (FIS-GP) contains geophysical measurements and evaluations primarily for the territory of Germany. In addition to data by LIAG, FIS-GP contains data from other partner institutions.
- The architecture of the overall system is built up by a homogeneous structured database and its subdivision into a parent part (***superstructure***) and several method specific ***subsystems***.
- FIS-GP is also available to the public (particular to partner institutions) via an ***internet interface***.
- It is intended to build up a comprehensive database covering all of Germany (e.g. underground temperatures) by including data owned by other institutions and make it available.

System architecture



Internet interface (FIS-GP-Search and FIS-GP-Viewer)

To access FIS-GP via the internet, LIAG developed two interconnected user interfaces on the basis of open source tools. For the use a ***browser*** is needed.

- ***FIS-GP-Viewer*** allows geographic search and display of measurements and boreholes. FIS-GP-Viewer is based primarily on ***MapServer***.

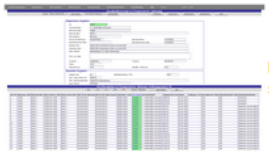
- ***FIS-GP-Search*** provides an ***attribute-oriented search*** via search forms and other functions (download, print, diagrams, maps, statistics, gridding, interpretation).

The next slide shows the start page…

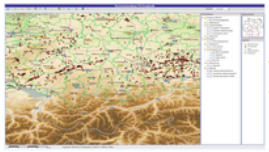
Geophysics Information System

deutsch english

Start application



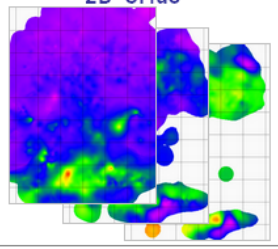
FIS-GP-Search offers a menu- and form-based user interface with search, visualization, download and print options.



With FIS-GP-Viewer geophysical data objects can be displayed and selected on interactive maps in different coordinate systems.

Borehole geophysics	2,114 measurement logs from 536 boreholes and 605 composite logs from 605 boreholes
1D geoelectrics	21,591 Schlumberger soundings (max. profile length of 15 km) and 5,092 evaluations
2D geoelectrics	61 profiles and 30 evaluations
Gravimetry	355,989 gravity measurements
Magnetics	1,344,295 measuring points (mainly from aeromagnetics)
Temperatures	66,591 temperature values from 11,273 boreholes (to a depth of up to 9,100 m)
2D Seismic	139 seismic profiles and 300 evaluations
3D Seismic	1 seismic measurement
Vertical seismic profiles	19 VSP measurements and 51 evaluations
Aero geophysics	18 survey areas with 1,773 flight lines and 917,308 measuring points (methods hem, hmg and hrd)
Petrophysics	8,601 measurements on 2,009 samples from 165 boreholes
Transient electromagnetics	3 campaigns with 56 measurements and 112 evaluations
SkyTEM	6 areas with 909 profiles, 175,210 measuring points and 1,898 evaluations

2D-Grids



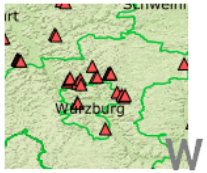
re3data.org
REGISTRY OF RESEARCH DATA REPOSITORIES

http://doi.org/10.17616/R3D889

Fachinformationssystem Geophysik

FLEX-PP

Excel-basiertes Erfassungsprogramm
für die Petrophysik



web services

User-Login

The next slide shows the ***login page*** of FIS-GP. The ***authentication*** is done by entering user name and password, secured by https-protocol.

A ***guest account*** with restricted rights for datas is available for public access.

Geophysics Information System

Login Page

Forgot password?

The access to the datas in FIS GP is protected. Also as guest you have access to free data within FIS GP.

- Please enter your nickname (or Gast = guest account) and password and press 'Login' to start LIAG's Geophysics Information System (FIS GP).
- After entering an invalid nickname or password, the next entry will be delayed depending on the number of preceding failed attempts.
- If you are a new user needing more rights to geophysics datas than the guest account grants, please press 'Registration' to create your personal account. You will then get an automatic email with your password.
  Note: an internal registration is not possible. Please switch to the external application by clicking on the link FIS Geophysics.
- If you forgot the password of your existing account, press 'Forgot password?', enter your registered nickname and order to get back your password via email.
- Your nickname and password will be preserved in cookies for your next session. You may disable this by main menu item: Settings→Session→Session Parameters).

Nickname: Gast

Password:

Login

☐ I accept the following usage conditions:

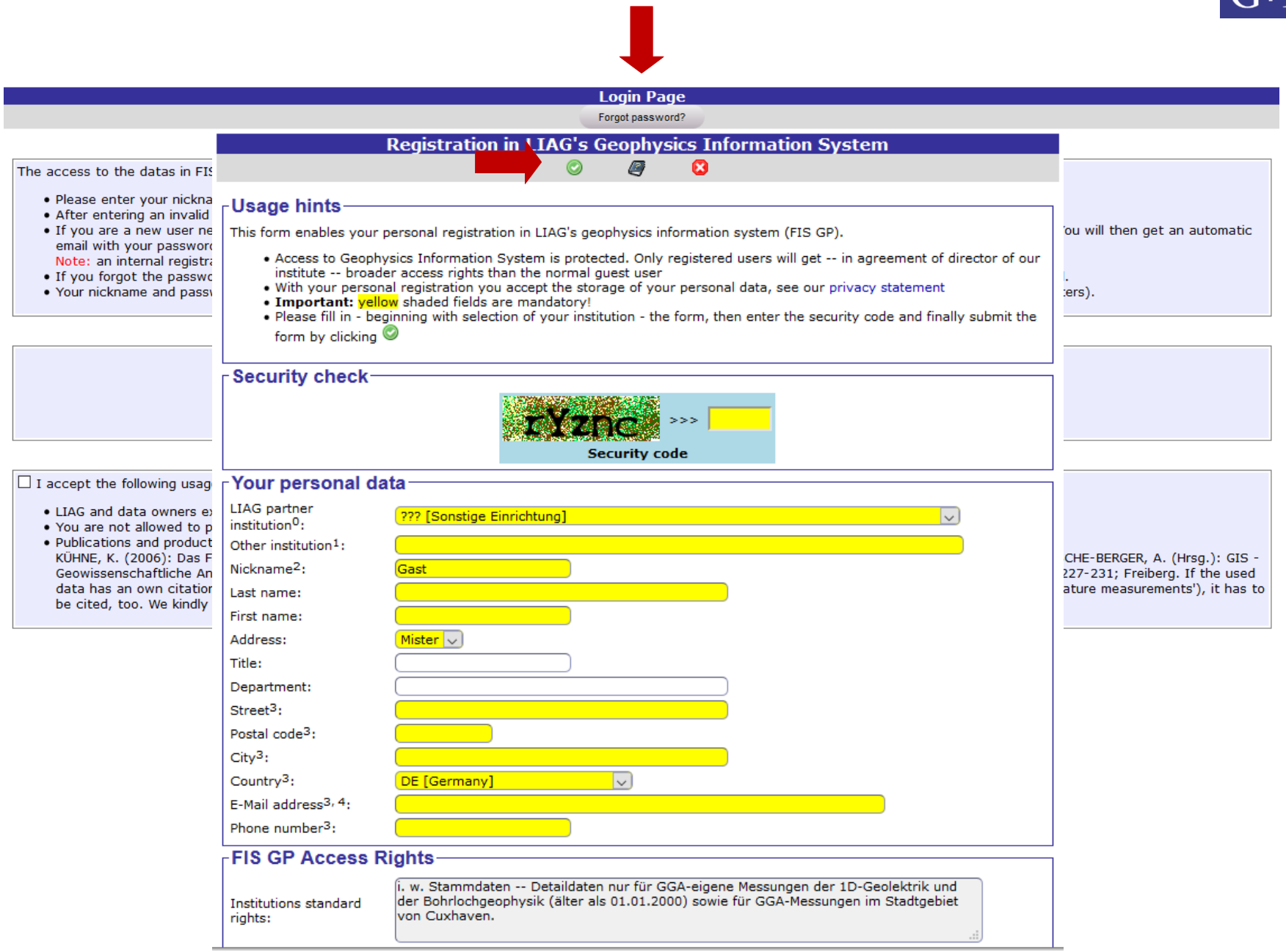
- LIAG and data owners exclude any warranty for the correctness of data within FIS GP.
- You are not allowed to pass data extracted from FIS GP to third parties.
- Publications and products created out of FIS GP data must contain a citation:
  KÜHNE, K. (2006): Das Fachinformationssystem Geophysik und seine Nutzung über das Internet. - In: MERKEL, B., SCHAEBEN, H., WOLKERSDORFER, C. & HASCHE-BERGER, A. (Hrsg.): GIS - Geowissenschaftliche Anwendungen und Entwicklungen, 57. Berg- und Hüttenmännischer Tag, 23.06.2006, Wiss. Mitteilungen des Instituts für Geologie, 31: 227-231; Freiberg. If the used data has an own citation (see parent 'projects' and 'campaigns' of measurements and interpretations, see 'grids', 'composite logs' and 'boreholes with temperature measurements'), it has to be cited, too. We kindly request a specimen copy in case of publication.

Setting up a user account

The next slide shows the ***registration*** of a FIS-GP user. The assignment of rights depends on the affiliation with a certain institution. Additional rights can be requested.

The transmission of login name and password takes place ***automatically via https or e-mail.***

Geophysics Information System



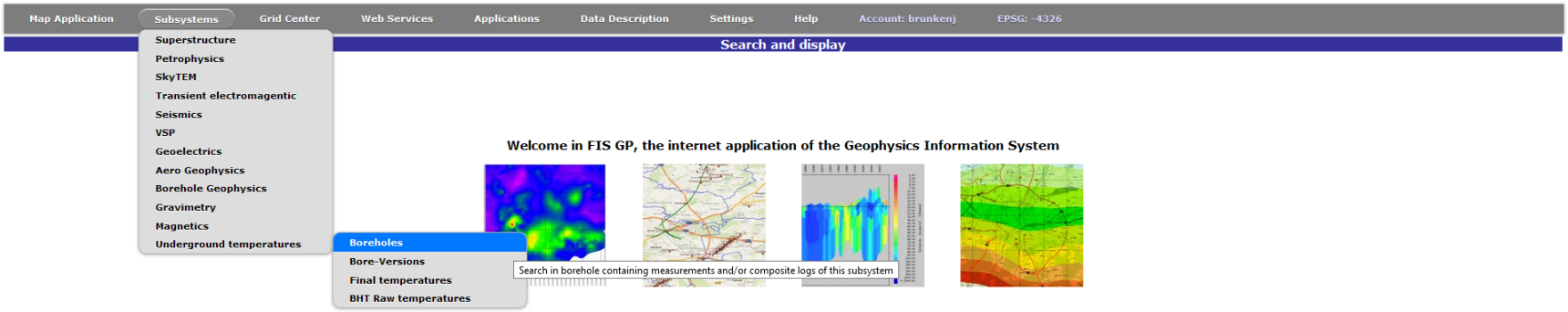
Information page

On the next slide you will see the ***information page*** of FIS-GP.

Via the menu bar you can select a subsystem and a searchable object-type (measurement, measuring device, evaluation, …). In addition, you can start the map application and see more information.

The two sections under the menu bar serve for the input of search conditions and for displaying results.

Geophysics Information System



User instructions

The internet application of the Geophysics Information System offers two different search facilities (forms based/map based search), as well as download, visuaization and evaluation of searched data objects.

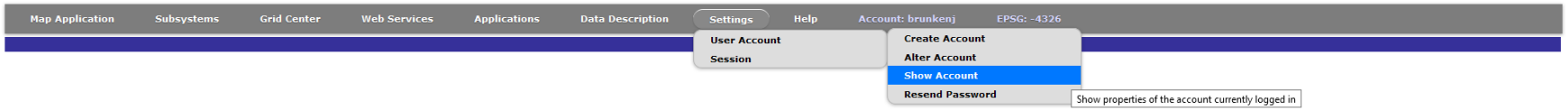
- The main menu item **map application (FIS-GP-Viewer)** allows you to search, visualize and export data objects (boreholes and measurements) in a map based way with selectable topics. This functionality is also in the geophysical search available, on the Button "Map Viewer" in the single search hit. The record is displayed in a map viewer.
- In order to start the **forms-based search (FIS-GP-Search)**, choose one of the geophysical **subsystems** (magnetics, gravimetry, ...) or the **supersystem** (common metadata for objects of all subsystems) from the main menu:
  - Now a submenu opens below the selected main menu item. Within this submenu, you may select the desired **data object class** (measurements, devices etc.).
  - If you search within the supersystem, this search works subsystem-independent. If you search within a selected subsystem, only objects bound to this subsystem, e.g. only projects containing gravimetrical measurements, will be searched.
  - After choosing the object class to be searched, a search condition entry form appears in the upper frame of the screen. Please enter your search conditions and press button **start search** to start search procedure.
  - Data objects matching the search conditions are displayed as a table within the lower frame. This table is called **hitlist view**. Each hitlist row contains a subset of important attributes of search hit object. Due to performance reasons, the number of hitlist rows visible at the same time is limited. However, using the navigation buttons, you can page through the whole hitlist. A mouseclick on an entry in column **ID** of the hitlist shows the object with all of its attributes in the upper frame. This view is called **single hit view**.
  - Within the single hit view, you may navigate to neighbour objects in the database, e.g. from a measurement device to the measurements performed with this device. These neighbour objects are displayed as list in the lower screen frame again, exactly like a search hitlist.
  - Both in the hitlist and in the single hit view you may apply different **start action** for analyzing, visualizing, interpreting, download etc. to the data object(s).
- A third possibility for accessing FIS GP data exists under main menu item **grid center**. This part of FIS GP contains and offers regular geo-referenced grids (currently only 2D grids) of different geophysical themes, e. g. gravimetric anomalies, underground temperatures etc. Grids can be reduced to subgrids, exported, visualized or used for calculations.
- FIS GP offers several kinds of **help facilities**:
  - **Help text bubbles** appear if you touch form elements with the mouse pointer and a HTML help page appear if you press the help button on a FIS GP form.
  - Data descriptions of superstructure and subsystems are available via **data description** of the main menu.
- Menu item **settings** may be used to show and (in some cases) to modify the user account and the personal settings. At this time there are only two submenu items:
  - Meu item **user account** shows information about your user account (e.g. your address and your access rights) and allows the change of some account attributes.
  - Menu item **session** shows and changes different session parameters, e.g. the choice of a system for entering and displaying of coordinates.

Display user rights

The menu item ***Show Account*** displays the user account and the role with all properties of the registered user.

In the lower section you find a ***Access Control List.*** Every search result set is compared according to the list.

In the case shown on the next slide, the user has unrestricted access to all data, which belong to the BGR, the LBEG (formerly NLfB) and the LIAG (formerly GGA).



Alter FIS GP user account

Usage hints

- This action shows the properties of your FIS GP user account on screen.
- Please press to change the properties of your account.

Account properties

User account			
Nickname			
Last name		**First name**	
Address	Herr	**Title**	
Street	Stilleweg 2	**Postal code**	30655
City	Hannover	**Country**	Germany
LIAG partner institution	Leibniz-Institut für Angewandte Geophysik		
Other institution		**Department**	
E-Mail address		**Phone number**	
Desired access rights			
Reasons for rights			
Creation date		**Expiration date**	

Role of this user account	
Rights role	STD-GGA / Alle Inhalte des FIS GP
Max. # processable objects type 1	2000000
Max. # processable objects type 2	2000000
Max. # showable query hit objects	5000

Access control list (ACL)

No.	Filter condition										Max. Max. protection class
	Subsystem	Project	Campaign	Data owner	Coordinates window[1]				Map sheet window 1:25000[1]		Adm. unit key[1,2]
					Xmin	Ymin	Xmax	Ymax	TK-Nr. NW	TK-Nr. SO	
1											5 - nur LIAG und Dateninhaber

Footers

[1] Either ... or ...
[2] See official German municipality directory

Presentation of FIS-GP-Search on several examples:

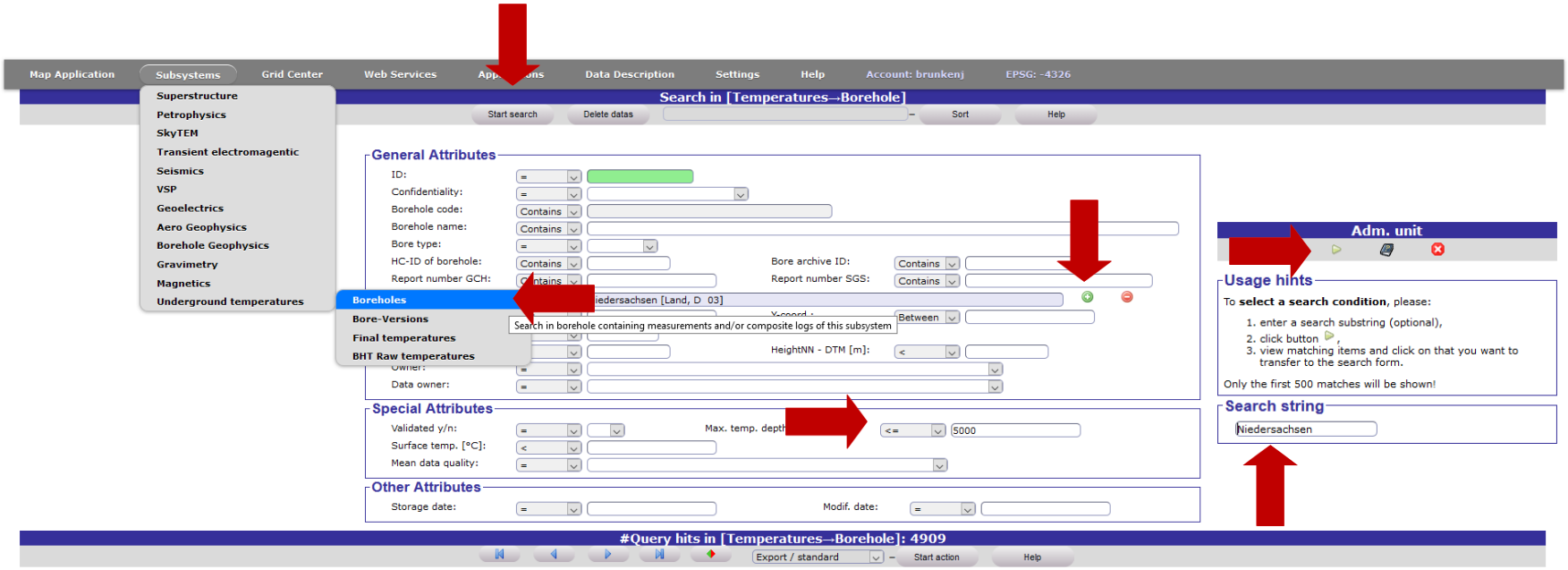
Input of search conditions:

The menu item ***temperatures*** shows the searchable object types of this subsystem.

A mouse click on the submenu item ***boreholes*** opens a form in which search conditions for boreholes with temperature measurements can be defined.

The following slide shows a search for all temperature boreholes in Lower Saxony with a final depth <= 5000 m.

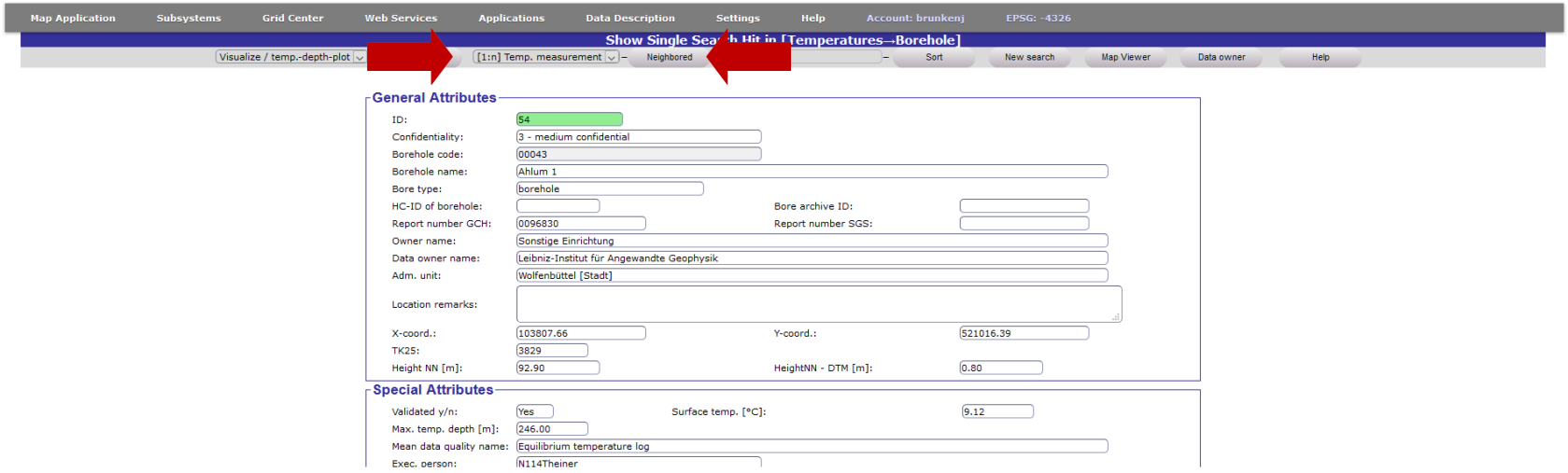
Geophysics Information System



Sequ. no.	ID (Link)	Confidentiality	Borehole code	Borehole name	Bore type	HC-ID of borehole	Bore archive ID	Owner code	Data owner code	Adm. unit	TK25	Validated y/n	Mean data quality code
1	54	3 - medium confidential	00043	Ahlum 1	borehole			???	LIAG	Wolfenbüttel [Stadt]	3829	yes	UL
2		3 - medium confidential	00085	Hoheneggelsen/Brunnen 24	borehole		3827HY0221	???	LIAG	Söhlde [Einheitsgemeinde]	3827	yes	UL
3		3 - medium confidential	00087	Hoheneggelsen/B125 Brunnen 26	borehole		3827HY0223	???	LIAG	Söhlde [Einheitsgemeinde]	3827	yes	UL
4		3 - medium confidential	00097	Fallingbostel 1	borehole		3124HY0081	???	KWI	Bad Fallingbostel [Stadt]	3124	yes	UL
5		3 - medium confidential	00148	Hollage 1	borehole		3613SE0049	???	LIAG	Wallenhorst [Einheitsgemeinde]	3613	yes	UL
6		3 - medium confidential	00156	Gosetal IV	borehole		4128BV0040	???	LIAG	Goslar [Stadt]	4128	yes	UL
7	161	3 - medium confidential	00157	Gosetal V	borehole		4128BV0041	???	LIAG	Goslar [Stadt]	4128	yes	UL
8	164	3 - medium confidential	00160	Quakenbrück	borehole			???	LIAG	Quakenbrück [Mitgliedsgemeinde (Stadt)]	3313	yes	UL
9	168	3 - medium confidential	00164	Gehlenberg B1	borehole			???	LIAG	Friesoythe [Stadt]	3012	yes	GL
10	169	3 - medium confidential	00165	Gehlenberg B2	borehole			???	LIAG	Hilkenbrook [Mitgliedsgemeinde]	3012	yes	GL
11	170	3 - medium confidential	00166	Sülbeck II	borehole			???	LIAG	Einbeck [Stadt]	4225	yes	UL
12	173	3 - medium confidential	00169	Gelmketal 2	borehole			???	LIAG	Goslar [Stadt]	4028	yes	UL
13	190	3 - medium confidential	00189	Bad Salzdetfurth Kurpark 1	borehole			???	LIAG	Bad Salzdetfurth [Stadt]	3926	yes	UL
14	209	3 - medium confidential	00208	Kroge	borehole		3320GE0056	???	LIAG	Marklohe [Mitgliedsgemeinde]	3320	yes	UL
15	218	3 - medium confidential	00217	Gosetal VI	borehole		4128BV0042	???	LIAG	Goslar [Stadt]	4128	yes	UL
16	221	3 - medium confidential	00220	Gosetal IX	borehole		4128BV0036	???	LIAG	Goslar [Stadt]	4128	yes	UL
17	222	3 - medium confidential	00221	Ahlequelle 1	borehole			???	LIAG	Solling (Landkreis Northeim) [gemeindefreies Gebiet]	4223	yes	UL
					borehole		4323HY0008	???	LIAG	Uslar [Stadt]	4323	yes	UL

https://fis-gp.liag-hannover.de/fis_gp/qform_seekform.php?_language=en&view_name=BORE_UTE

Geophysics Information System



#Query hits in [Temperatures→Borehole→Final Temperature]: 5

Export / standard – Start action – Help

Sequ. no.	Borehole code	Borehole name	Bore version code	Bore version name	HC-ID of borehole	HC-ID of bore version	Data owner code	ID (Link)	Confidentiality	True vert. depth [m]	Date	Final temp. [°C]	Corr. type code	Data origin code	Data origin name
1	00043	Ahlum 1	00043-001	Ahlum 1, Version 001			LIAG	130468	3 - medium confidential	20.00	04.06.1984	11.48	LOG	110	Equilibrium temperature log (LIAG)
2	00043	Ahlum 1	00043-001	Ahlum 1, Version 001			LIAG	130469	3 - medium confidential	40.00	04.06.1984	11.88	LOG	110	Equilibrium temperature log (LIAG)
3	00043	Ahlum 1	00043-001	Ahlum 1, Version 001			LIAG	130470	3 - medium confidential	140.00	04.06.1984	14.72	LOG	110	Equilibrium temperature log (LIAG)
4	00043	Ahlum 1	00043-001	Ahlum 1, Version 001			LIAG	130471	3 - medium confidential	152.00	04.06.1984	15.00	LOG	110	Equilibrium temperature log (LIAG)
5	00043	Ahlum 1	00043-001	Ahlum 1, Version 001			LIAG	130472	3 - medium confidential	246.00	04.06.1984	18.60	LOG	110	Equilibrium temperature log (LIAG)

Display of the set of hits

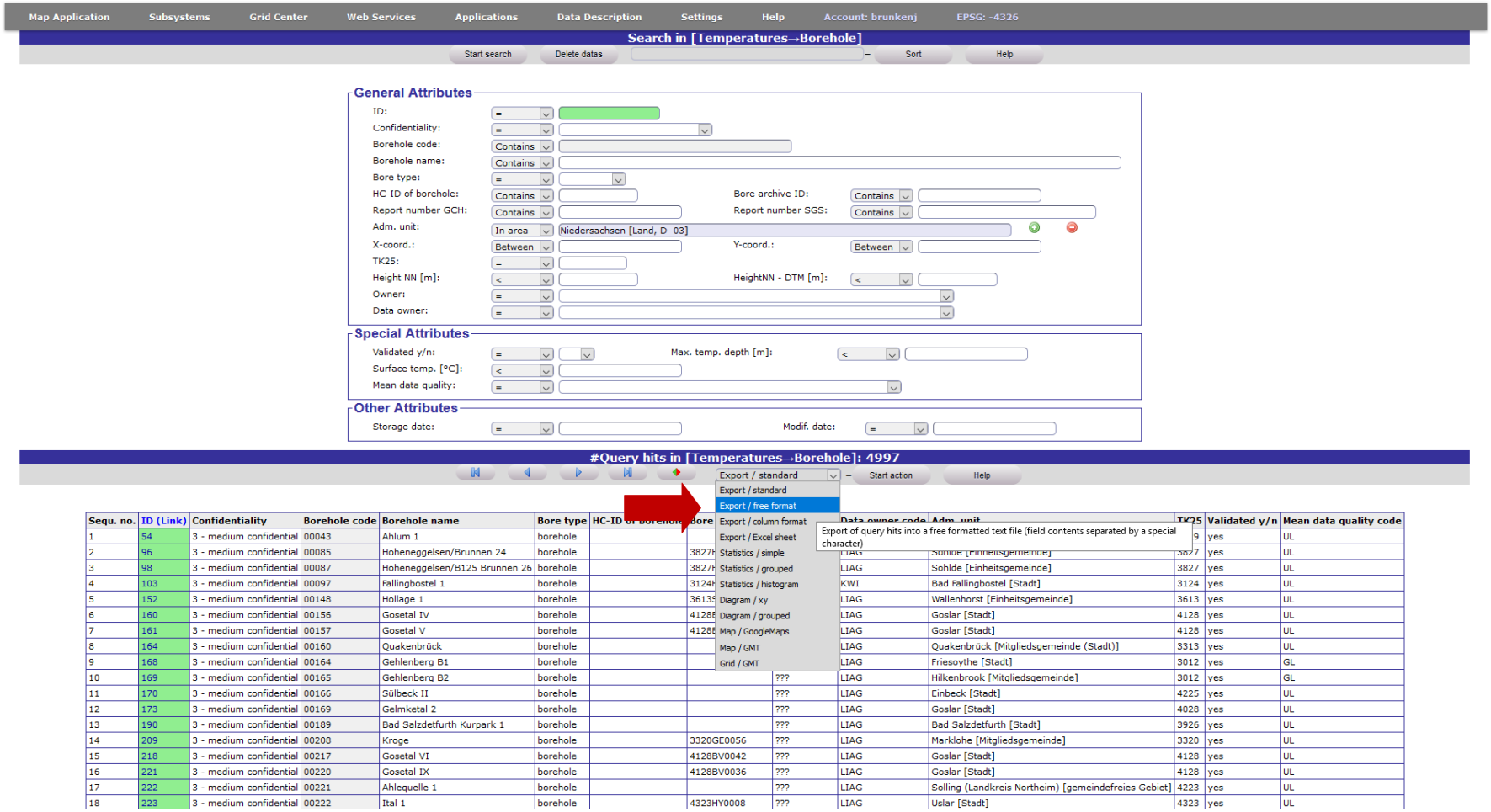
A mouse click on the button ***search*** starts the search.

All temperature boreholes in the database matching the search conditions are displayed in the ***set of hits*** in the lower section.

The menu item ***Start action*** above the set of hits shows the applicable evaluation and interpretation options.

The menu item ***Export/free format*** is selected in the following slide.

Geophysics Information System

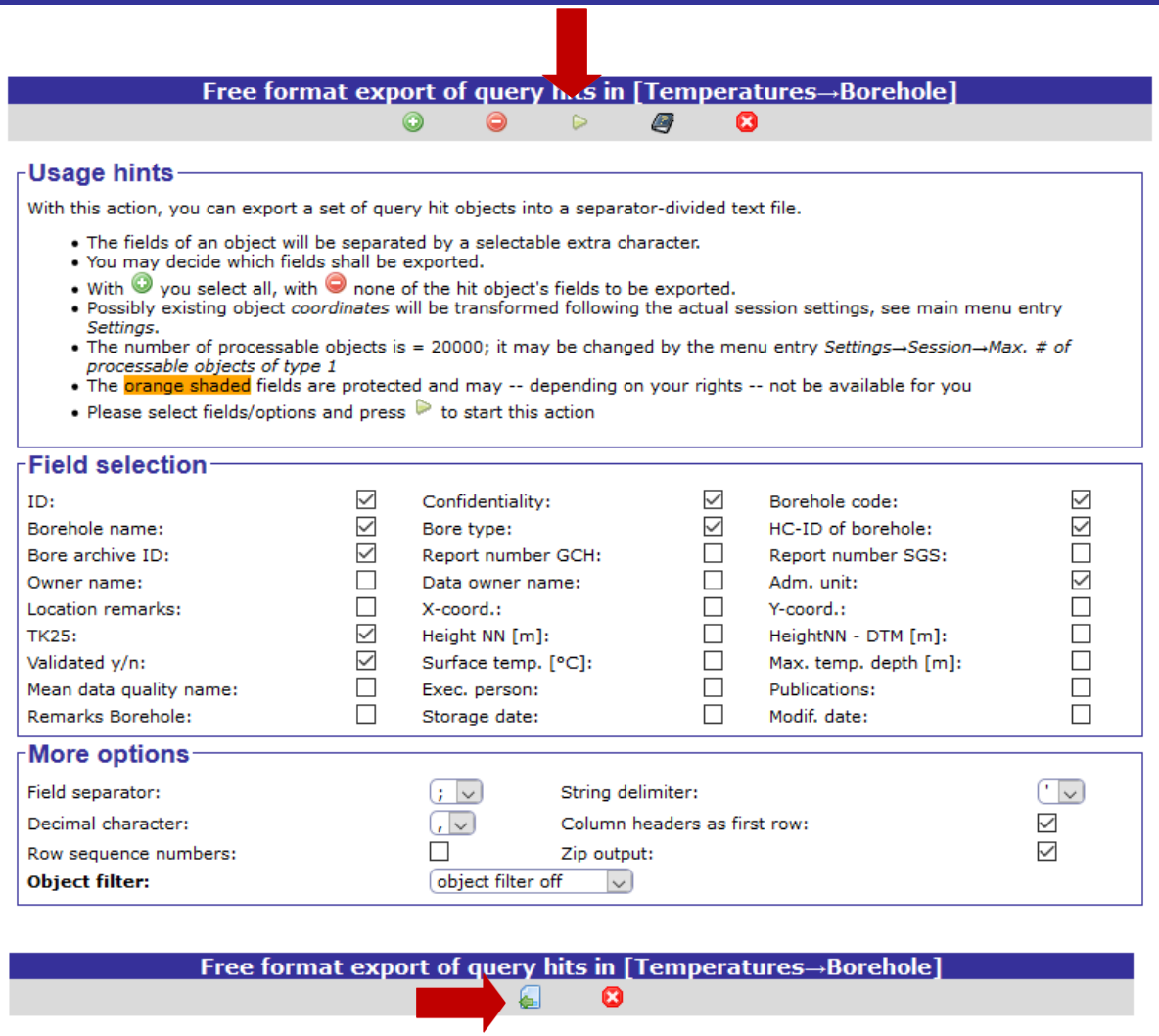


Sequ. no.	ID (Link)	Confidentiality	Borehole code	Borehole name	Bore type	HC-ID of borehole	Bore		Data owner code	Adm. unit	TK25	Validated y/n	Mean data quality code
1	54	3 - medium confidential	00043	Ahlum 1	borehole						9	yes	UL
2	96	3 - medium confidential	00085	Hoheneggelsen/Brunnen 24	borehole		3827H				3827	yes	UL
3	98	3 - medium confidential	00087	Hoheneggelsen/B125 Brunnen 26	borehole		3827H		LIAG	Söhlde [Einheitsgemeinde]	3827	yes	UL
4	103	3 - medium confidential	00097	Fallingbostel 1	borehole		3124H		KWI	Bad Fallingbostel [Stadt]	3124	yes	UL
5	152	3 - medium confidential	00148	Hollage 1	borehole		36139		LIAG	Wallenhorst [Einheitsgemeinde]	3613	yes	UL
6	160	3 - medium confidential	00156	Gosetal IV	borehole		4128E		LIAG	Goslar [Stadt]	4128	yes	UL
7	161	3 - medium confidential	00157	Gosetal V	borehole		4128E		LIAG	Goslar [Stadt]	4128	yes	UL
8	164	3 - medium confidential	00160	Quakenbrück	borehole				LIAG	Quakenbrück [Mitgliedsgemeinde (Stadt)]	3313	yes	UL
9	168	3 - medium confidential	00164	Gehlenberg B1	borehole				LIAG	Friesoythe [Stadt]	3012	yes	GL
10	169	3 - medium confidential	00165	Gehlenberg B2	borehole			???	LIAG	Hilkenbrook [Mitgliedsgemeinde]	3012	yes	GL
11	170	3 - medium confidential	00166	Sülbeck II	borehole			???	LIAG	Einbeck [Stadt]	4225	yes	UL
12	173	3 - medium confidential	00169	Gelmketal 2	borehole			???	LIAG	Goslar [Stadt]	4028	yes	UL
13	190	3 - medium confidential	00189	Bad Salzdetfurth Kurpark 1	borehole			???	LIAG	Bad Salzdetfurth [Stadt]	3926	yes	UL
14	209	3 - medium confidential	00208	Kroge	borehole		3320GE0056	???	LIAG	Marklohe [Mitgliedsgemeinde]	3320	yes	UL
15	218	3 - medium confidential	00217	Gosetal VI	borehole		4128BV0042	???	LIAG	Goslar [Stadt]	4128	yes	UL
16	221	3 - medium confidential	00220	Gosetal IX	borehole		4128BV0036	???	LIAG	Goslar [Stadt]	4128	yes	UL
17	222	3 - medium confidential	00221	Ahlequelle 1	borehole			???	LIAG	Solling (Landkreis Northeim) [gemeindefreies Gebiet]	4223	yes	UL
18	223	3 - medium confidential	00222	Ital 1	borehole		4323HY0008	???	LIAG	Uslar [Stadt]	4323	yes	UL

Export a set of hits to a download file

On the next slide you will see the column selection and the format options for the query and the display of the export statistics.

A mouse click on the hyperlink ***download zipfile*** opens or downloads the file.



Free format export of query hits in [Temperatures→Borehole]

Usage hints

With this action, you can export a set of query hit objects into a separator-divided text file.

- The fields of an object will be separated by a selectable extra character.
- You may decide which fields shall be exported.
- With you select all, with none of the hit object's fields to be exported.
- Possibly existing object *coordinates* will be transformed following the actual session settings, see main menu entry *Settings*.
- The number of processable objects is = 20000; it may be changed by the menu entry *Settings→Session→Max. # of processable objects of type 1*
- The orange shaded fields are protected and may -- depending on your rights -- not be available for you
- Please select fields/options and press to start this action

Field selection

ID:	☑	Confidentiality:	☑	Borehole code:	☑
Borehole name:	☑	Bore type:	☑	HC-ID of borehole:	☑
Bore archive ID:	☑	Report number GCH:	☐	Report number SGS:	☐
Owner name:	☐	Data owner name:	☐	Adm. unit:	☑
Location remarks:	☐	X-coord.:	☐	Y-coord.:	☐
TK25:	☑	Height NN [m]:	☐	HeightNN - DTM [m]:	☐
Validated y/n:	☑	Surface temp. [°C]:	☐	Max. temp. depth [m]:	☐
Mean data quality name:	☐	Exec. person:	☐	Publications:	☐
Remarks Borehole:	☐	Storage date:	☐	Modif. date:	☐

More options

Field separator:	;	String delimiter:	'
Decimal character:	,	Column headers as first row:	☑
Row sequence numbers:	☐	Zip output:	☑
Object filter:	object filter off		

Free format export of query hits in [Temperatures→Borehole]

Action finished

- 4909 objects in search result set. Thereof have been suppressed:
  - 0 objects by the actual object filter object filter off
  - 0 objects due to exceedance of the current export limit = '20000' (see menu entry *Configuration→Settings*)
- 4909 objects written to Zipped export file

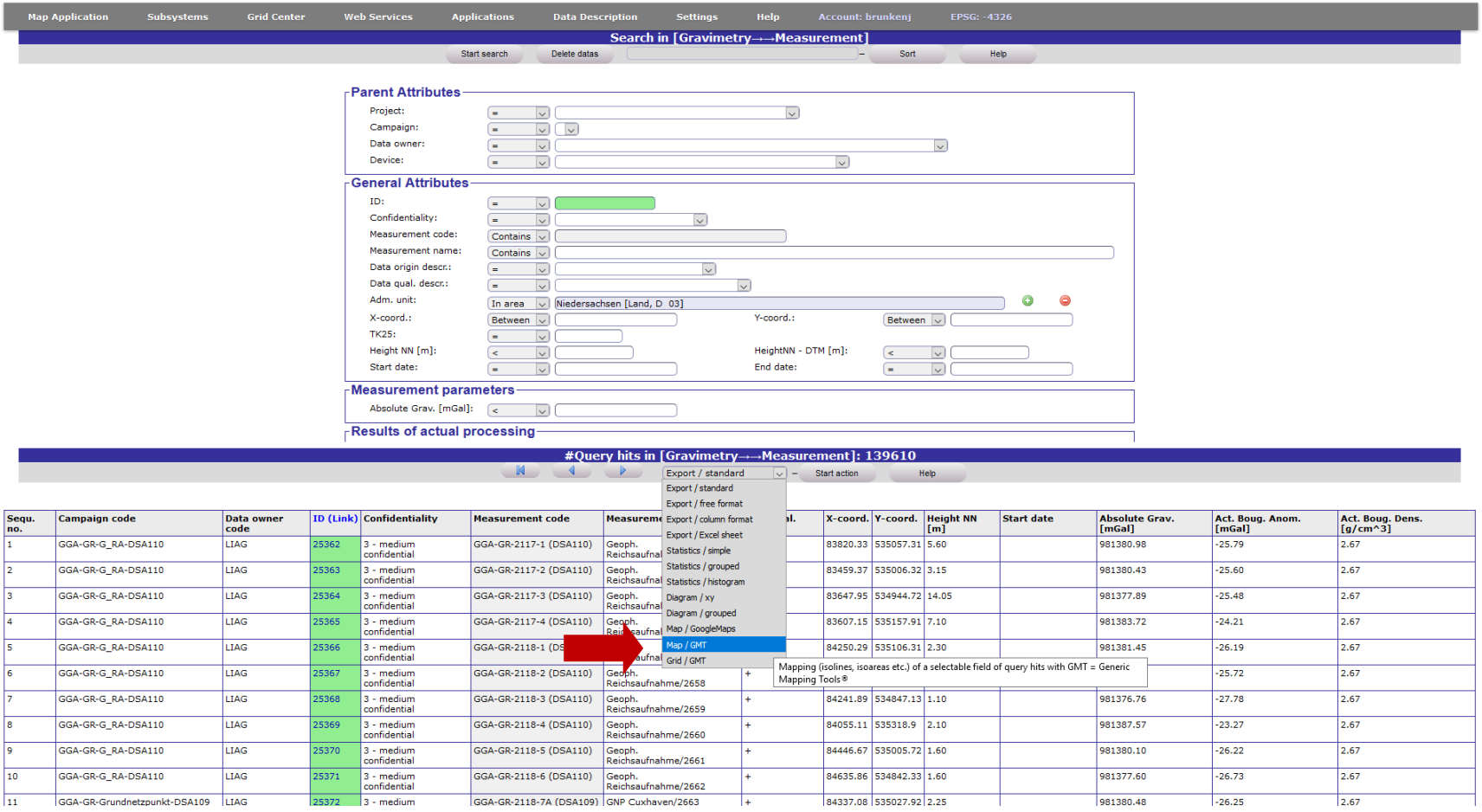
Download zipfile with 87.5 KB created.

Visualization a set of hits as a map

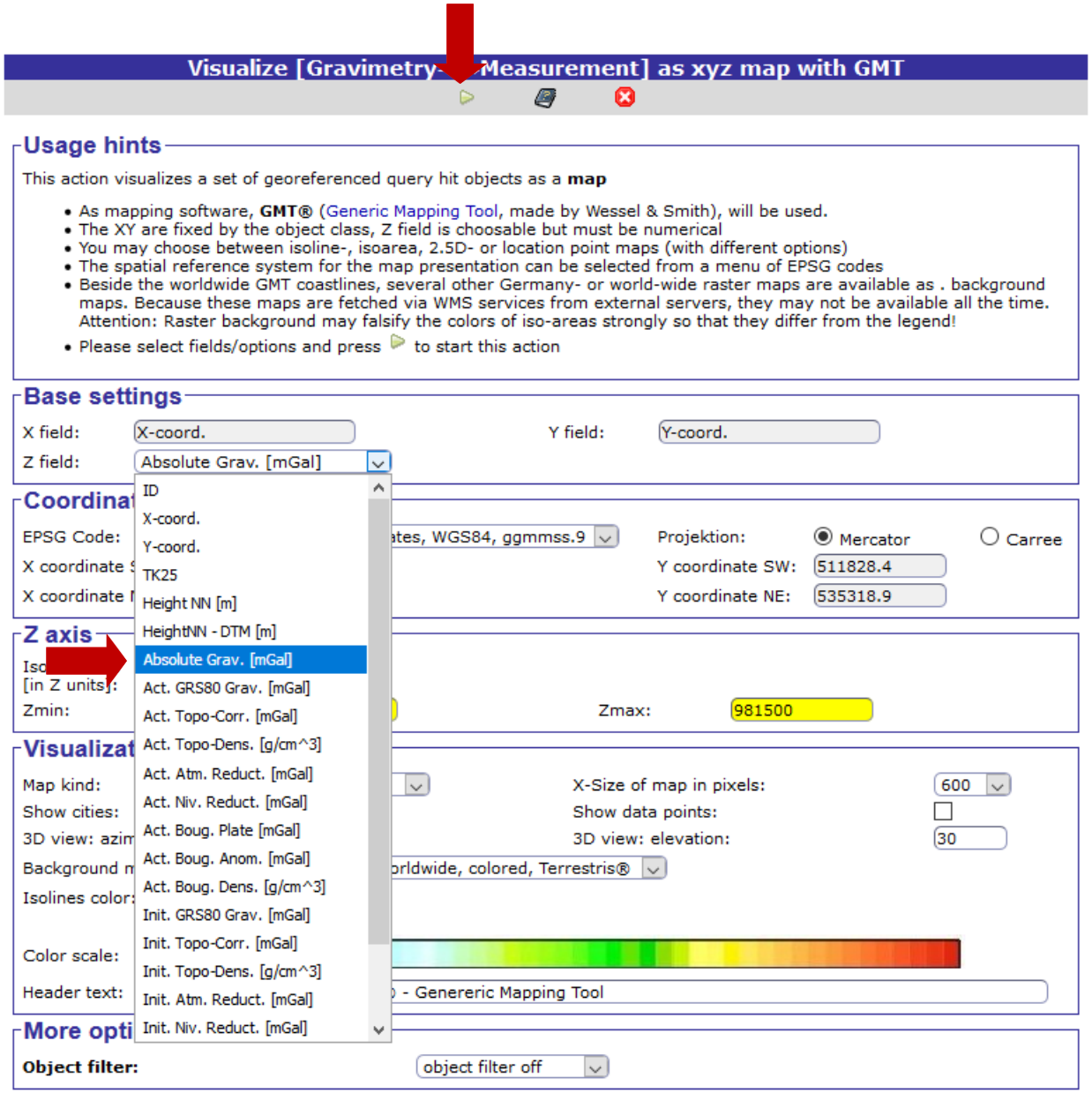
On the next slides you will see a ***search in the subsystem gravimetry*** (selection of all measuring points in the district Hanover) and the visualization of the set of hits using the software ***GMT*** (Generic Mapping Tools).

The ***z-field*** for the visualization of a xyz map is selectable in the ***base settings***. The absolute gravity is used here.

Geophysics Information System



Sequ. no.	Campaign code	Data owner code	ID (Link)	Confidentiality	Measurement code	Measureme	al.	X-coord.	Y-coord.	Height NN [m]	Start date	Absolute Grav. [mGal]	Act. Boug. Anom. [mGal]	Act. Boug. Dens. [g/cm^3]
1	GGA-GR-G_RA-DSA110	LIAG	25362	3 - medium confidential	GGA-GR-2117-1 (DSA110)	Geoph. Reichsaufnal		83820.33	535057.31	5.60		981380.98	-25.79	2.67
2	GGA-GR-G_RA-DSA110	LIAG	25363	3 - medium confidential	GGA-GR-2117-2 (DSA110)	Geoph. Reichsaufnal		83459.37	535006.32	3.15		981380.43	-25.60	2.67
3	GGA-GR-G_RA-DSA110	LIAG	25364	3 - medium confidential	GGA-GR-2117-3 (DSA110)	Geoph. Reichsaufnal		83647.95	534944.72	14.05		981377.89	-25.48	2.67
4	GGA-GR-G_RA-DSA110	LIAG	25365	3 - medium confidential	GGA-GR-2117-4 (DSA110)	Geoph. Reichsaufnal		83607.15	535157.91	7.10		981383.72	-24.21	2.67
5	GGA-GR-G_RA-DSA110	LIAG	25366	3 - medium confidential	GGA-GR-2118-1 (DS	aufnal		84250.29	535106.31	2.30		981381.45	-26.19	2.67
6	GGA-GR-G_RA-DSA110	LIAG	25367	3 - medium confidential	GGA-GR-2118-2 (DSA110)	Geoph. Reichsaufnahme/2658	+						-25.72	2.67
7	GGA-GR-G_RA-DSA110	LIAG	25368	3 - medium confidential	GGA-GR-2118-3 (DSA110)	Geoph. Reichsaufnahme/2659	+	84241.89	534847.13	1.10		981376.76	-27.78	2.67
8	GGA-GR-G_RA-DSA110	LIAG	25369	3 - medium confidential	GGA-GR-2118-4 (DSA110)	Geoph. Reichsaufnahme/2660	+	84055.11	535318.9	2.10		981387.57	-23.27	2.67
9	GGA-GR-G_RA-DSA110	LIAG	25370	3 - medium confidential	GGA-GR-2118-5 (DSA110)	Geoph. Reichsaufnahme/2661	+	84446.67	535005.72	1.60		981380.10	-26.22	2.67
10	GGA-GR-G_RA-DSA110	LIAG	25371	3 - medium confidential	GGA-GR-2118-6 (DSA110)	Geoph. Reichsaufnahme/2662	+	84635.86	534842.33	1.60		981377.60	-26.73	2.67
11	GGA-GR-Grundnetzpunkt-DSA109	LIAG	25372	3 - medium	GGA-GR-2118-7A (DSA109)	GNP Cuxhaven/2663	+	84337.08	535027.92	2.25		981380.48	-26.25	2.67

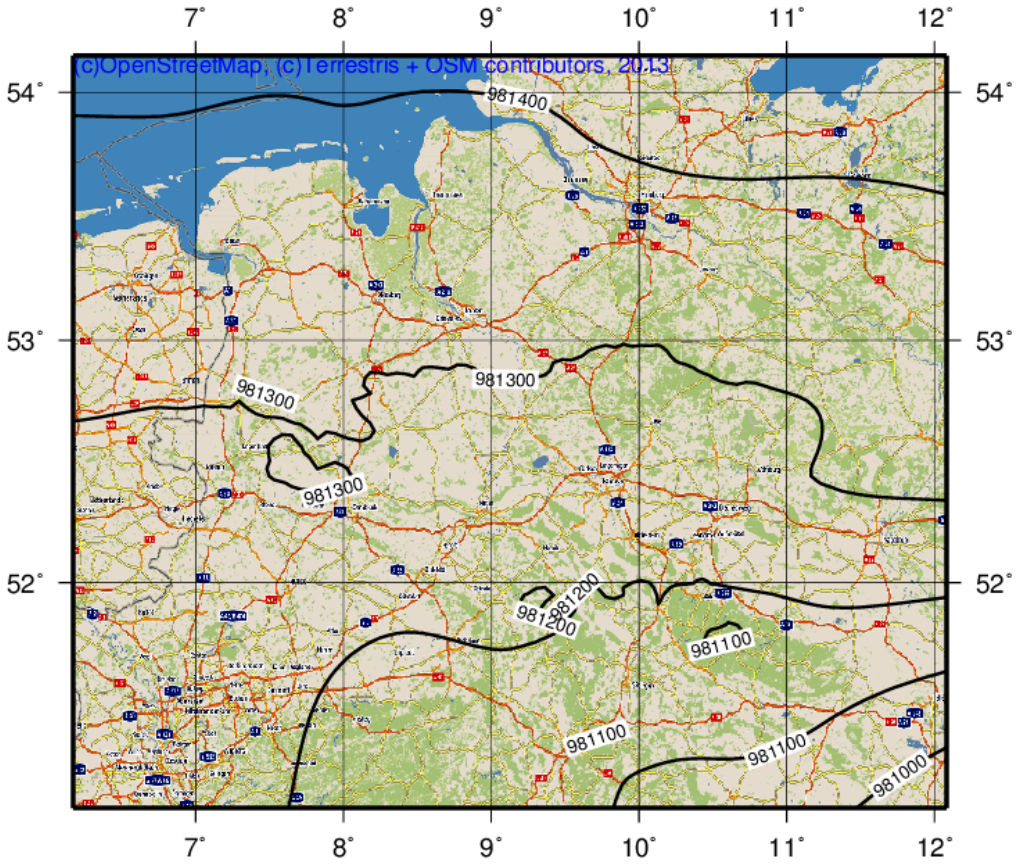

Visualize [Gravimetry - Measurement] as xyz map with GMT
Usage hints
This action visualizes a set of georeferenced query hit objects as a map
As mapping software, GMT® (Generic Mapping Tool, made by Wessel & Smith), will be used.
The XY are fixed by the object class, Z field is choosable but must be numerical
You may choose between isoline-, isoarea, 2.5D- or location point maps (with different options)
The spatial reference system for the map presentation can be selected from a menu of EPSG codes
Beside the worldwide GMT coastlines, several other Germany- or world-wide raster maps are available as . background maps. Because these maps are fetched via WMS services from external servers, they may not be available all the time. Attention: Raster background may falsify the colors of iso-areas strongly so that they differ from the legend!
Please select fields/options and press to start this action
Base settings
X field:
X-coord.
Y field:
Y-coord.
Z field:
Absolute Grav. [mGal]
ID
X-coord.
Y-coord.
TK25
Height NN [m]
HeightNN - DTM [m]
Absolute Grav. [mGal]
Act. GRS80 Grav. [mGal]
Act. Topo-Corr. [mGal]
Act. Topo-Dens. [g/cm^3]
Act. Atm. Reduct. [mGal]
Act. Niv. Reduct. [mGal]
Act. Boug. Plate [mGal]
Act. Boug. Anom. [mGal]
Act. Boug. Dens. [g/cm^3]
Init. GRS80 Grav. [mGal]
Init. Topo-Corr. [mGal]
Init. Topo-Dens. [g/cm^3]
Init. Atm. Reduct. [mGal]
Init. Niv. Reduct. [mGal]
EPSG Code:
Projektion:
Mercator
Carree
Y coordinate SW:
511828.4
Y coordinate NE:
535318.9
Z axis
Zmin:
Zmax:
981500
Map kind:
X-Size of map in pixels:
600
Show cities:
Show data points:
3D view: elevation:
30
Isolines color:
Color scale:
Header text:
Object filter:
object filter off

Visualize [Gravimetry→→Measurement] as xyz map with GMT

Action finished

Created with GMT® - Genereric Mapping Tool

- Coordinate window (Lat SW, Lon SW, Lat NE, Lon NE) restriction is: (63946.7, 511828.4), (113522, 535318.9)
- Selected z-field is: [ABS_SCHW_AKT]
- 139610 objects in search result set. There have been suppressed:
  - 0 objects due to the current object filter setting: object filter off
  - 0 objects due to empty x-, y- or z-fields
  - 0 objects due to locked x-, y- or z-fields
  - >0 objects due to an exceedance of the current processing limit = 20000 (see menu entry *Settings→Session→Max. # of processable objects of type 1*)
- 20000 objects have been used for mapping



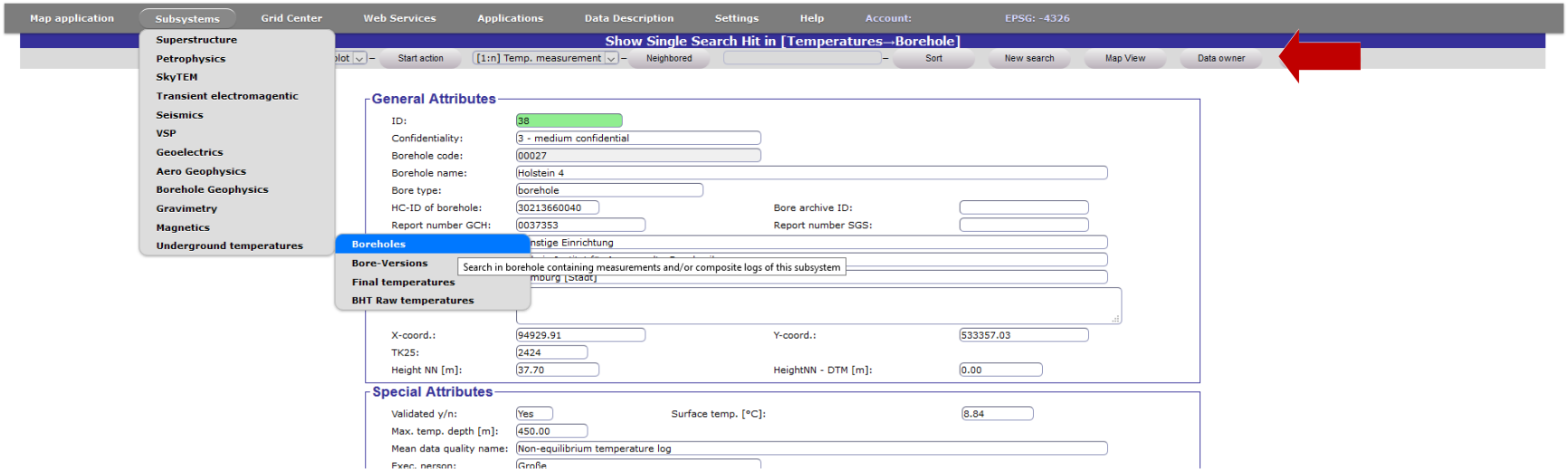
Displaying protected database objects

Sensitive data are ***hidden*** if a user has not the access right to a database object.

Information on a single hit are shown after clicking on its ID in the set of hits. In particular the user can retrieve contact information of the data owner via the button ***show contact information***, in order to clarify the conditions of use.

Therefore, FIS Geophysics acts as a ***geophysical data management system***.

Geophysics Information System



#Query hits in [Temperatures→Borehole→Final Temperature]: 18

Export / standard – Start action – Help

Sequ. no.	Borehole code	Borehole name	Bore version code	Bore version name	HC-ID of borehole	HC-ID of bore version	Data owner code	ID (Link)	Confidentiality	True vert. depth [m]	Date	Final temp. [°C]	Corr. type code	Data origin code	Data origin name
1	00027	Holstein 4	00027-001-502	Holstein 4	30213660040	302136600401	LIAG	165853	3 - medium confidential	25.00	28.01.1982		LOG	220	Non-equilibrium temperature log (BGR, LBEG)
2	00027	Holstein 4	00027-001-502	Holstein 4	30213660040	302136600401	LIAG	165854	3 - medium confidential	50.00	28.01.1982		LOG	220	Non-equilibrium temperature log (BGR, LBEG)
3	00027	Holstein 4	00027-001-502	Holstein 4	30213660040	302136600401	LIAG	165855	3 - medium confidential	75.00	28.01.1982		LOG	220	Non-equilibrium temperature log (BGR, LBEG)
4	00027	Holstein 4	00027-001-502	Holstein 4	30213660040	302136600401	LIAG	165856	3 - medium confidential	100.00	28.01.1982		LOG	220	Non-equilibrium temperature log (BGR, LBEG)

Contact the data owning institution

Field	Content
Data Owner:	Leibniz-Institut für Angewandte Geophysik
Communication/Distribution /Contact:	LIAG
Street:	Stilleweg 2
Postal code:	30655
City:	Hannover
Country:	Deutschland
Web homepage:	http://www.liag-hannover.de
Contact person:	Dr. Thorsten Agemar
E-Mail address:	thorsten.agemar@liag-hannover.de
Phone number:	(0511)643-2937

Presentation of FIS-GP-Viewer

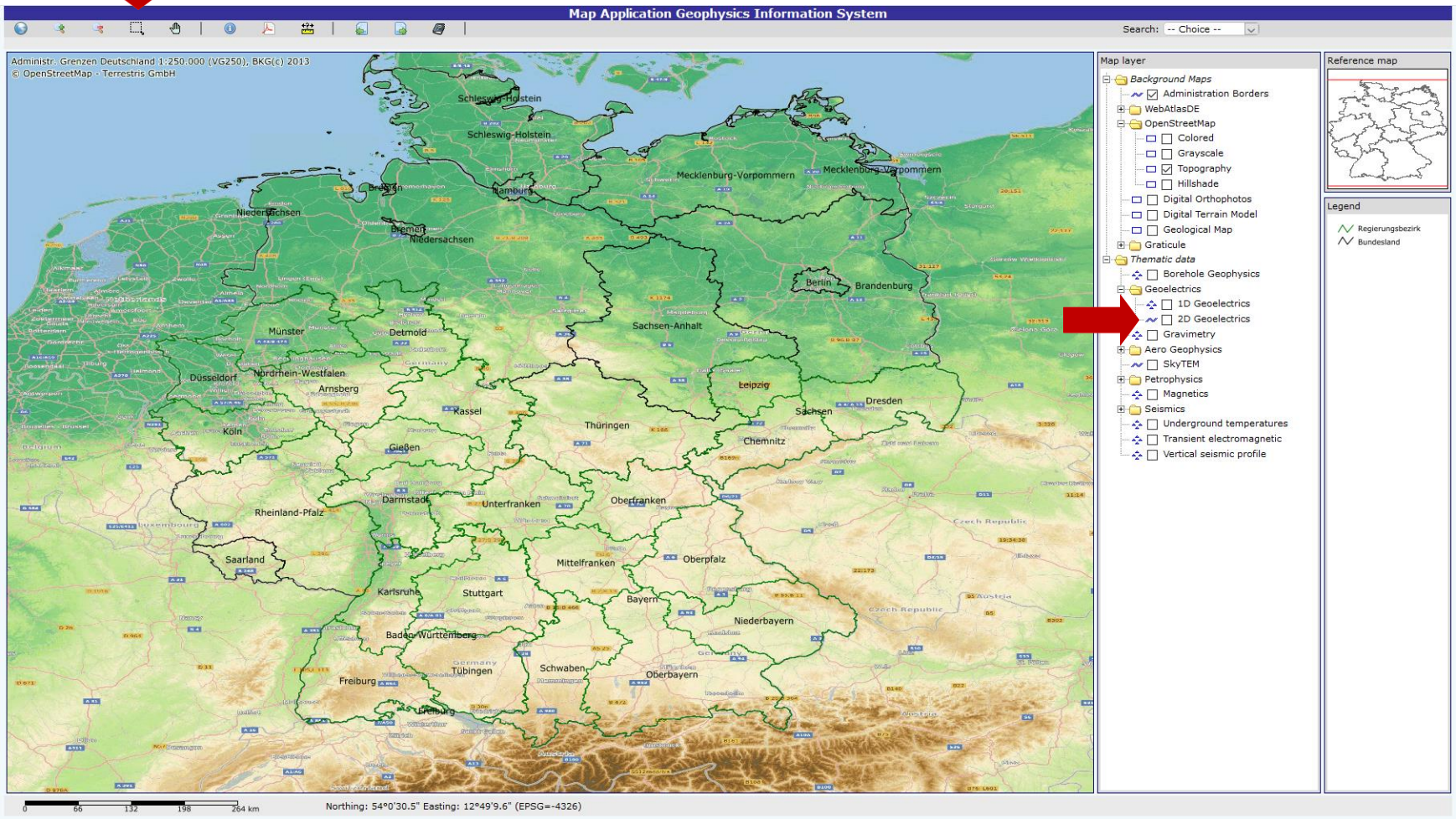
Geophysical search for data

FIS-GP-Viewer is an application of the ***MapServer*** configured for FIS Geophysics and allows the geographical search for georeferenced content (e.g. measurements).

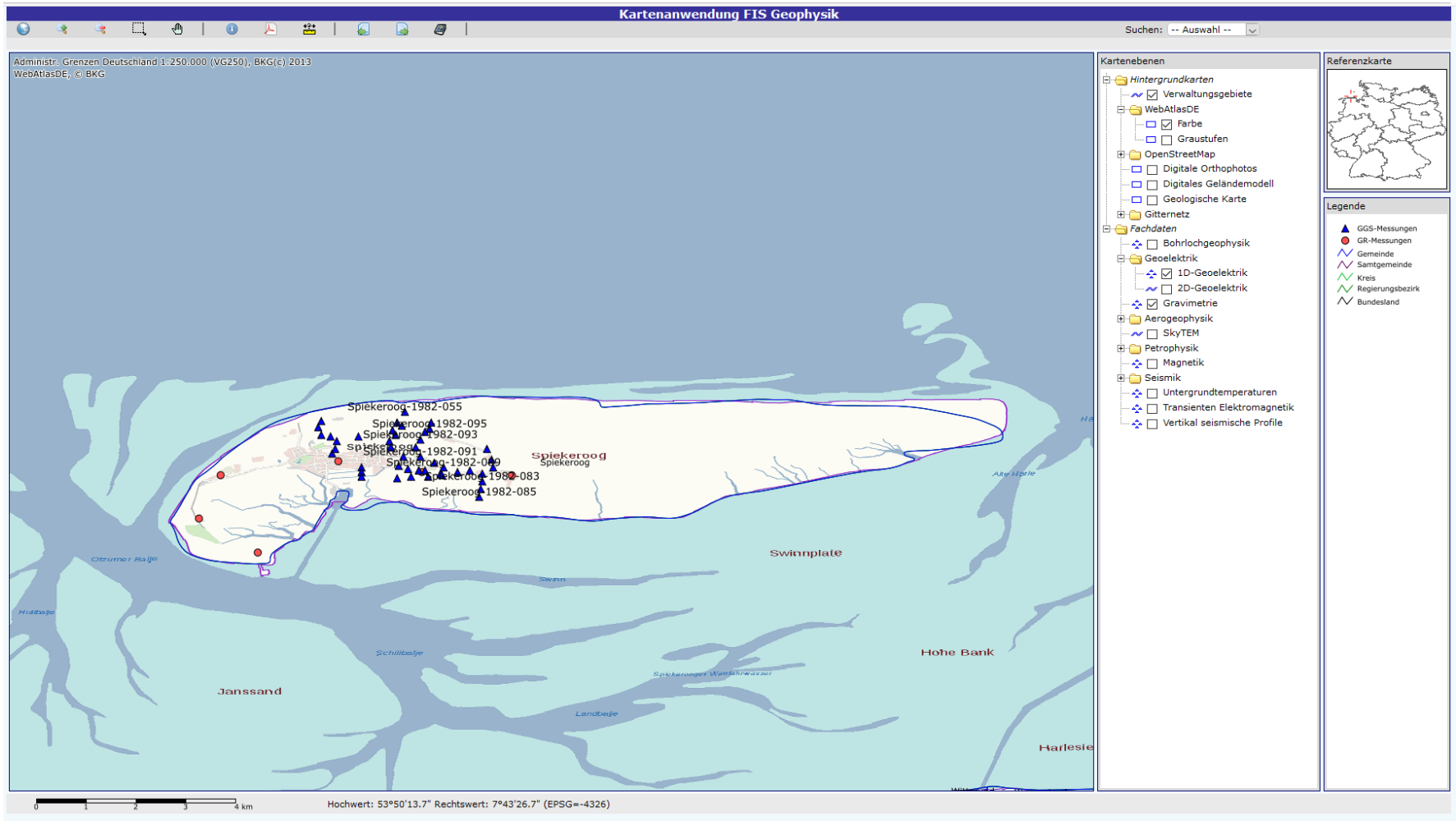
On the next slides you will see:

- the start page of FIS-GP-Viewer with a map view, a menu bar and a selecting for ***background and subsystem-layers***;
- the result of a selection of the subsystems 1D geoelectric and gravimetry (supplemented by a topographical background) and the navigation to the island Spiekeroog.

Geophysics Information System



Geophysics Information System



Selection, display and download of search results

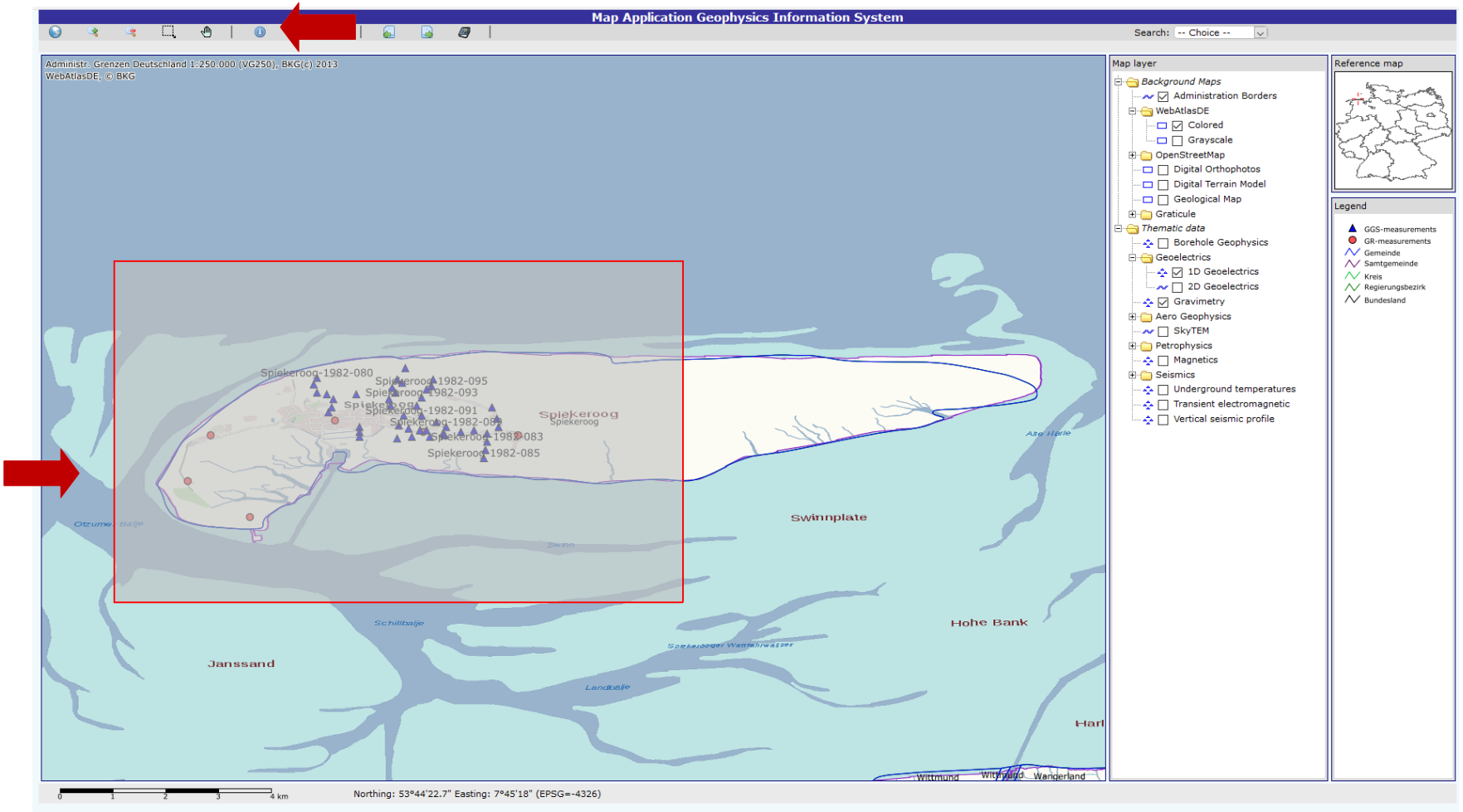
Content of the next three slides:

1) Database objects can be selected and displayed as a set of hits via the button ***Show object(s) information***.

2) Detailed information of a single hit can be shown by clicking the ***Object ID***. If you like to download measurement data you have to choose an individual ***Subsystem*** from the drop-down menu and click the button ***Export hit objects***.

3) To start the download press the button ***Start action***.

Geophysics Information System



Geophysics Information System

LIST OF HIT OBJECTS

Subsystem: GGS=1D Geoelectrics

- No Choice
- BL=Borehole Geoph.
- GGS=1D Geoelectrics
- GG2=2D Geoelectrics
- GR=Gravimetry
- HEM=HGP Electromag.
- HMG=HGP Magnetics
- HRD=HGP Radiometry
- HST=HGP SkyTEM
- PDB=PP Bulk Density
- PDG=PP Grain Density
- PPO=PP Porosity
- PPE=PP Permeability
- PTCO=PP Therm. Conduct.
- PTPCO=PP Thermal Diffusiv.
- PTCA=PP Heat Capacity
- PRAD=PP Heat Prod. Rate
- PNMR=PP Nuclearmag. Res.
- PMIN=PP Mineral
- MG=Magnetics

LIST OF HIT OBJECTS

Subsystem	Object ID	Object Code	Object Name			00 Map	Campaign	Measurement data available	Date
Gravimetry	25673	GGA-GR-2212-3 (NLFB02)	Ostfriesische Inseln/29				GGA-GR-Ostfriesische-Inseln-NLFB02	Yes	Jun 5 1975 12:00AM
Gravimetry	25674	GGA-GR-2212-4 (NLFB02)	Ostfriesische Inseln/29				GGA-GR-Ostfriesische-Inseln-NLFB02	Yes	Jun 5 1975 12:00AM
Gravimetry	25675	GGA-GR-2212-5 (NLFB02)	Ostfriesische Inseln/29				GGA-GR-Ostfriesische-Inseln-NLFB02	Yes	Jun 5 1975 12:00AM
Gravimetry	25676	GGA-GR-2212-6 (NLFB02)	Ostfriesische Inseln/29				GGA-GR-Ostfriesische-Inseln-NLFB02	Yes	Jun 5 1975 12:00AM
Gravimetry	25677	GGA-GR-2212-7 (NLFB02)	Ostfriesische Inseln/29				GGA-GR-Ostfriesische-Inseln-NLFB02	Yes	Jun 5 1975 12:00AM
Gravimetry	25678	GGA-GR-2212-8 (NLFB02)	Ostfriesische Inseln/29				GGA-GR-Ostfriesische-Inseln-NLFB02	Yes	Jun 5 1975 12:00AM
1D-Geoelectrics	13411	GGA-GGS-Spiekeroog-1982-051	Spiekeroog-1982-051				GGA-GGS-Spiekeroog-1982	Yes	Mai 18 1982 12:00AM
1D-Geoelectrics	13420	GGA-GGS-Spiekeroog-1982-052	Spiekeroog-1982-052				GGA-GGS-Spiekeroog-1982	Yes	Mai 18 1982 12:00AM
1D-Geoelectrics	13429	GGA-GGS-Spiekeroog-1982-053	Spiekeroog-1982-053				GGA-GGS-Spiekeroog-1982	Yes	Mai 18 1982 12:00AM
1D-Geoelectrics	13438	GGA-GGS-Spiekeroog-1982-054	Spiekeroog-1982-054				GGA-GGS-Spiekeroog-1982	Yes	Mai 18 1982 12:00AM
1D-Geoelectrics	13447	GGA-GGS-Spiekeroog-1982-055	Spiekeroog-1982-055				GGA-GGS-Spiekeroog-1982	Yes	Mai 18 1982 12:00AM
1D-Geoelectrics	13456	GGA-GGS-Spiekeroog-1982-056	Spiekeroog-1982-056				GGA-GGS-Spiekeroog-1982	Yes	Mai 18 1982 12:00AM
1D-Geoelectrics	13465	GGA-GGS-Spiekeroog-1982-057	Spiekeroog-1982-057				GGA-GGS-Spiekeroog-1982	Yes	Mai 18 1982 12:00AM
1D-Geoelectrics	13474	GGA-GGS-Spiekeroog-1982-058	Spiekeroog-1982-058				GGA-GGS-Spiekeroog-1982	Yes	Mai 18 1982 12:00AM
1D-Geoelectrics	13483	GGA-GGS-Spiekeroog-1982-059	Spiekeroog-1982-059				GGA-GGS-Spiekeroog-1982	Yes	Mai 19 1982 12:00AM
1D-Geoelectrics	13492	GGA-GGS-Spiekeroog-1982-060	Spiekeroog-1982-060				GGA-GGS-Spiekeroog-1982	Yes	Mai 19 1982 12:00AM
1D-Geoelectrics	13501	GGA-GGS-Spiekeroog-1982-061	Spiekeroog-1982-061				GGA-GGS-Spiekeroog-1982	Yes	Mai 19 1982 12:00AM
1D-Geoelectrics	13510	GGA-GGS-Spiekeroog-1982-062	Spiekeroog-1982-062	LIAG	2212		GGA-GGS-Spiekeroog-1982	Yes	Mai 19 1982 12:00AM
1D-Geoelectrics	13519	GGA-GGS-Spiekeroog-1982-062A	Spiekeroog-1982-062A	LIAG	2212		GGA-GGS-Spiekeroog-1982	Yes	Mai 21 1982 12:00AM
1D-Geoelectrics	13528	GGA-GGS-Spiekeroog-1982-063	Spiekeroog-1982-063	LIAG	2212		GGA-GGS-Spiekeroog-1982	Yes	Mai 21 1982 12:00AM
1D-Geoelectrics	13537	GGA-GGS-Spiekeroog-1982-064	Spiekeroog-1982-064	LIAG	2212		GGA-GGS-Spiekeroog-1982	Yes	Mai 21 1982 12:00AM
1D-Geoelectrics	13546	GGA-GGS-Spiekeroog-1982-065	Spiekeroog-1982-065	LIAG	2212		GGA-GGS-Spiekeroog-1982	Yes	Mai 21 1982 12:00AM
1D-Geoelectrics	13555	GGA-GGS-Spiekeroog-1982-066	Spiekeroog-1982-066	LIAG	2212		GGA-GGS-Spiekeroog-1982	Yes	Mai 21 1982 12:00AM
1D-Geoelectrics	13564	GGA-GGS-Spiekeroog-1982-067	Spiekeroog-1982-067	LIAG	2212		GGA-GGS-Spiekeroog-1982	Yes	Mai 24 1982 12:00AM
1D-Geoelectrics	13573	GGA-GGS-Spiekeroog-1982-068	Spiekeroog-1982-068	LIAG	2212		GGA-GGS-Spiekeroog-1982	Yes	Mai 24 1982 12:00AM

Export of a set of 1D-geoelectrical measurement

Usage hints

This action exports the searched measurements into a downloadable ZIP archive.

- The archive contains one file per measurement, named with the measurement's code
- Each file has a fixed ASCII format (GEOS)
- Coordinates of the measurements' center points will be transformed following the actual session settings, see main menu entry *Settings*.
- The max. number of processable measurements is = 500; it may be changed by menu entry *Configuration→Settings→Max. # of processable records of type 2.*
- Please press ▷ to start export

Action parameters

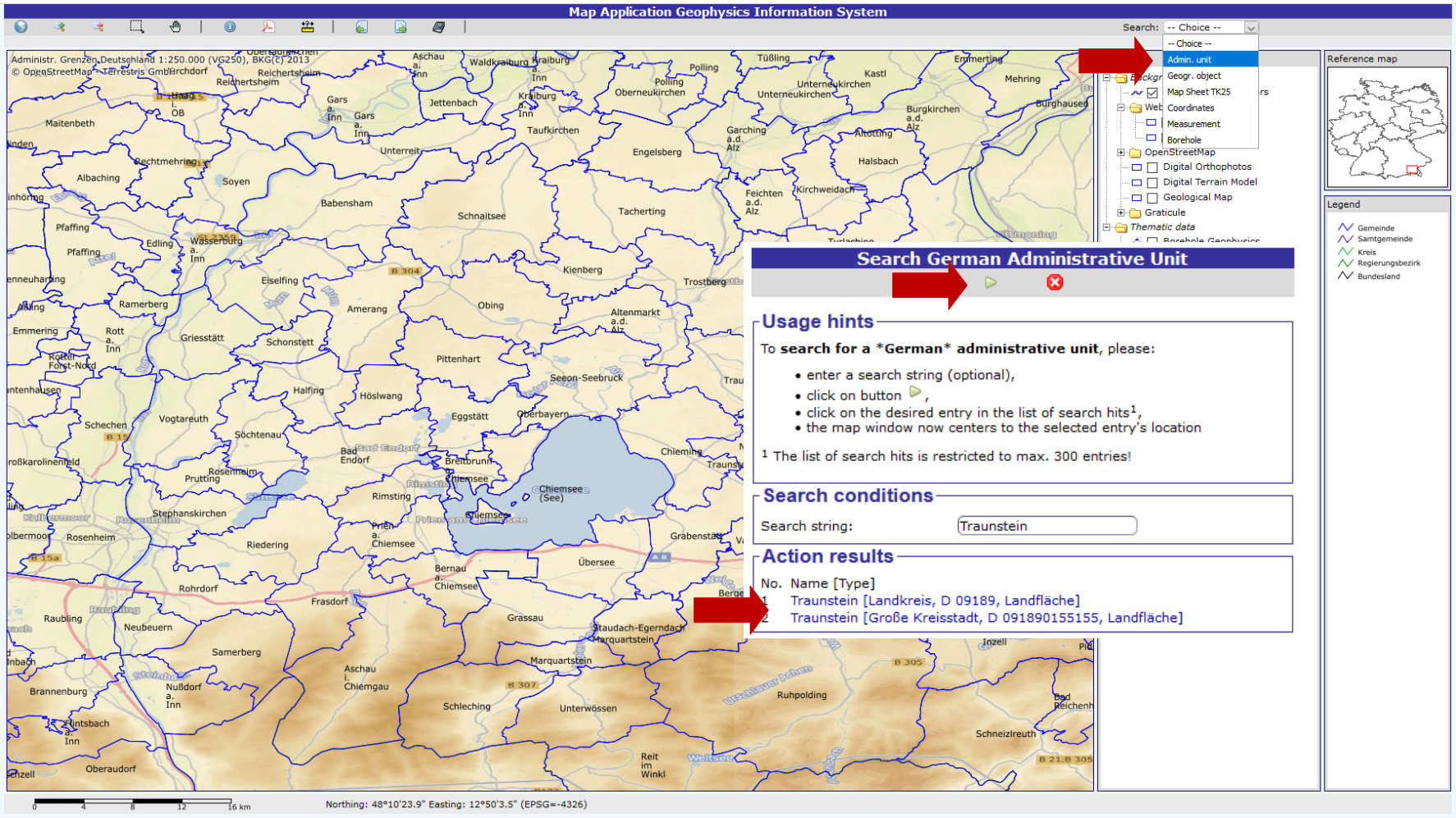
Object filter: object filter off

Navigation with FIS-GP-Viewer in the official municipal directory

A searchable ***offical municipal directory*** of Germany is integrated in FIS-GP-Viewer. A mouse click on an item of the action results ***centers*** the map window on the chosen municipality.

A similar search option exists for the list of the ***TK25-planetable sheets*** of Germany.

Geophysics Information System



Thank you for your interest!