

## 1 – Download Geotab application from:

- Google Play or Sobek's website

## 2 – Create default folders and files

- All Geotab files will be in /storage/emulated/0/Geotec
- Creation of a starter database: /data/Geotec\_en/Geotec\_en.db3
- Creation of two starter style files: /style/borehole.sty and /style/trench.sty
- Creation of a markers file and a patterns file, in /style
- Creation of a folder for future data exports: /export

## 3 – Permission to access storage (files and media)

- Open the tablet settings
- Go to App, then Geotab
- Make sure the permission to access storage (files and media) is allowed

## Types of files used

- Geotec databases \*.db3
- Style files \*.sty
- Markers \*.mrk
- Patterns \*.ptn
- Logos \*.jpg
- Log reports \*.pdf
- Sketches \*.png
- Photos \*.jpg

## 1 – Activate a monthly or annual contract with Sobek for your company


- Contact us at [genevieve@sobek-technologies.com](mailto:genevieve@sobek-technologies.com)

## 2 – Register the Android ID of your tablet (contact your IT)

- Enter the user code provided by Sobek and the admin password

## 3 – Activate your licence

- Enter the user code provided by Sobek
- Enter the automatic deactivation date of your licence

💡 At any time, you can deactivate your licence via the  item of the home screen. The licence is then available to another user of your company.

## HOME SCREEN: ITEMS AND MENU

### Current site and boring

This is the boring you are working on. The numbers are also indicated in the entry forms.

### Database.db3

This is the file in which data are saved.



### Information about the licence

This opens a box indicating: the automatic deactivation date, the number of days remaining for the licence, the contract renewal data and the number of licences available.



### Zoom

This is used to modify the zoom of the log. You can also use two fingers to increase or reduce the zoom.



### Google Maps

This opens Maps to see the location of borings, if their longitude and latitude are saved in the database.



### Site and Boring

This is used to open the list of existing sites / borings in order to select another, or to create a new one.



### List of forms

This is used to open on of the entry forms. You can also touch the associated column in the log.

### Open DB

To work on a different project

### Open style

To change the presentation

### Open logo

To display the company logo on the log report

### Create project

To create the folder of a new project and its database

### Generate report

To produce a PDF log report

### Export project

To send data

### Parameters

To modify the depth scale and other parameters

## Project

The project corresponds to all the data related to a project done for a client. It has its own folder in the /storage/emulated/0/Geotec/data/ directory.

In the project folder, there is the database, photos taken and sketches made while working on this database, as well as PDF log reports generated with the database.

## Database

This is the file in which data are saved. The database can contain several sites, borings, samples, etc.

## Site

The site corresponds to the mandate for which borings are being carried out. It is defined by a unique number in the database.

## Boring

The boring is defined by its number and its site number. The site-boring combination must be unique in each database. Samples, layers and other data will all be linked to this identification.

## Style file

This is the look of the presentation. It reads data from the connected database and presents them with the specified display. The style file can only be edited via Log on Windows.

### 1 – Select Create project from the home menu

### 2 – Select the database that will be copied to create Project.db3

- Either the Geotec (default) database with English or French structure
- Either a Geotec "Template.db3" database.

In *Template.db3*, you can predefine drop-down lists and lists types (cumulative, distinct, etc.), customize the entry forms with added fields, create in-situ properties for samples, etc.


By using the *Template.db3* database to create a new project, all that has been customized will be found in the Project.db3 database.

### 3 – Enter the project name

- The folder /storage/emulated/0/Geotec/data/Project will be created.
- The database /storage/emulated/0/Geotec/data/Project/Project.db3 will be created.
- All photos, sketches and PDF reports will be saved in the folder.

💡 By checking **Connect automatically to new project**, Geotab connects to the new database. Its name will be displayed in the home screen.

### 1 – To enter data, you must create a site


- Touch anywhere in the boring log, or
- Use the  icon of the home screen and select +NEW, or
- Use the Lists of forms of the home screen.

### 2 - Enter the Site N° in the dialog box


- The number must be unique in the database.
- Typically, this is the same as the project.

### 3 - Enter the data

- The data are saved in the database in SI units by default (see unit conversion in the entry forms).
- The coordinate systems are used for the calculation of the X and Y coordinates based on the longitudes and latitudes, or vice-versa.

💡 Use the  icon of the home screen to open and edit an existing site.


### 1 – After creating a site, create a boring

- Swipe left from the Site form, or
- Touch any column in the boring log, or
- Use the  icon of the home screen and select +NEW, or
- Use the Lists of forms of the home screen.

### 2 - Enter the Boring N° in the dialog box

- The combination of the site n° and boring n° must be unique.

### 3 - Enter the general data

- The start date is entered automatically.
- The total depth increments automatically.
- Get the GPS coordinates via  at the top.
- Enter the other data, from equipment to remark.

### 4 – Enter the hydrogeology information

- Click on WATER TABLE to enter 1 or 2 water table measurements.



### 5A – Enter the description of the casings used


- Click on CASINGS to detail the casings and driving methods used.



### 5B - Enter the description of the trench

- Click on TRENCH to detail the trench.
- The CASINGS button becomes TRENCH when the type of boring selected is TP (test pit), TR (trench) or HA (hand auger).

### Functions specific to Boring entry form

- Use  icon to create a new boring with this information copied: type, zone, reference, and equipment to remark.
- Open Maps via  at the top to see the location of the borings (current one shown in red), if their longitude and their latitude are saved in the database.

 To save battery, disable the GPS via the menu, when not required.

 Use the  icon of the home screen to open and edit an existing boring.

## DATA ENTRY CHARACTERISTICS

### Swiping

Swipe left or right to open another entry form. The data are automatically saved.

### Key fields (Site, Boring, Sample and Piezometer N°)

Key fields define a record as unique in the database. For the N°, you can use up to 20 characters including letters, numbers and symbols ( ) - . \_ . To modify the n°, touch the field and enter the new n° via the dialog box.

### Types of data fields

Fields can be required (label with \*), numerical (N), text (t) or date (D). The format is indicated in parentheses after the letter.

### Lists of values

The drop-down lists can show predefined values, or values already existing in the database. You can choose the type of list for each text field via the entry form customization.

### Calendar

The Android calendar with data and time picked can be used. Some dates are automatically suggested.

### Units for depths and lengths

In each entry form, the depths and lengths are displayed in the unit selected via the menu. The data are still saved in SI (by default) or in the unit system defined in the Site entry form.

## ENTRY FORMS (form name on the right): ITEMS AND MENU

### Home

This is to return to the log. All changes are automatically saved.

### Current site and boring

This is the boring you are working on. The numbers are also indicated on the boring log.

### Navigation arrows

This is used to go to the previous or next record, if applicable. You can use a long press to go directly to the first or last record.

### Save

This is used to save any data modification in the database.

### Add a record

This is used to create a new record, if applicable.

### Sketch


This opens a sketching pad. The sketch will be named Site\_Boring\_Sample\_Date-Time.png and will be saved in the project folder.

### Take photo

This opens the camera. The photo will be named Site\_Boring\_Sample\_Date-Time.jpg and will be saved in the project folder.

### Observations

This is used to quickly add an observation or remark at a certain depth or depth interval. The window shows all observations saved for the boring.

 Use a long press on a field to edit the value, customize the field or modify its drop-down list.

### Delete record

To delete the current record (if no dependent record exists)

### Cancel

To discard modifications in the current record

### Depths

To display and enter the depths in meters, or in feet

### Lengths

To display and enter the lengths in meters, feet, inches or centimeters

### Customize form

To modify the fields displayed, their label, display order, format (numerical) and type of list (texts)

### Edit drop-down lists

To create predefined lists for specific fields with associated color and pattern

### Complete form

To view all fields and their data in a 2-column format

## MULTI-RECORD TABLES IN ENTRY FORMS

These tables integrated to the entry forms show several records at once.


### Headings

They indicate the field names with their unit and if required (\*).



### Add a new row

Use the + to add a new row. A new row is always suggested when entering the form.


### Delete a row

To delete a row (record), check the box left of the row and touch  which appears at the top of the form.

### Horizontal scrolling

The scrolling only applies to Remarks. You can expand or shrink the Remark column via  or .

### 1 – After creating a boring, add samples

- Swipe left from the Boring form, or
- Touch any sample column in the boring log, or
- Use the Lists of forms of the home screen.
- Use  to create a new sample.

### 2 – Enter or modify the depth increment

- The top depth is automatically suggested.
- Without increment, the sampling is considered continuous.
- With an increment, the suggested depth is the top depth of previous sample plus the increment.

### 3 – Select the sample state

- It can be a grab, remolded, intact or core sample.
- The type and length are automatically entered based on the sample selected.
- The fields of the entry form differ based on the state.


### 4 – Edit the sample number (if needed)

- The N° of the first sample is suggested as 01 and can be modified. The number of the subsequent samples of the boring will be based on the previous sample (number and format).

### 5 – Enter other information






- The sampling date is entered automatically.
- Enter the caliber, tube number, recovery, blow counts and / or RQD, depending on the sample state.





### 6 – Describe the sample

- Describe the sample with the soil description matrix via .

### 7 – Add sub-samples (if needed)

- Sub-samples are automatically numbered A, B, C, ... and their number is a concatenation with the main sample, like 002A.
- The **Add sub-sample** button is active only if the current record is:
  - A sample with no sub-sample.
  - The last sub-sample of a sample, if the bottom depth of the sample has not been reached.
- Describe the sub-sample and other information.


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◀     ▶ SAMPLE

GRAB **REMOLDED** INTACT CORE

Run N°\* 002 Increment 2.50 ft

**Add sub-sample** t(1) Sample N°\* 002


Date 2021-09-03 11:26 

Type SS ▼ Caliber B ▼


Depth 2.50 ft to 4.50 ft 24.0 in

Recovery 17.0 in / 24.0 in 71 %

Blows per 6" 9 11 17 21 N= 28 Rem. t(40) ▼

Description Fill. Gravelly sand (fine to medium), some silt, compact, dry. 


Property*	Value 1	Value 2	Remark
<input type="checkbox"/> CONTAINER	<small>N(7.3)</small>	<small>N(7.3)</small>	<b>Small bag</b> ▼
<input type="checkbox"/> LEL	<b>57.0</b>	<small>N(7.1)</small>	<small>t(255)</small> ▼
<input type="checkbox"/> VOC	<small>N(7.3)</small>	<small>N(7.3)</small>	<small>t(255)</small> ▼

 Specify the lengths and types associated to each state by editing the drop-down list of the STATE field. The values **must be G, R, I and C**. The descriptions will be specified as **label, type, length** (in meters).


The following values are used by default if the types and lengths are not specified

- G → Grab, GB, 0.3
- R → Remoulded, SS, 0.61
- I → Undisturbed, ST, 0.914
- C → Rock core, CR, 1.524

### Add in-situ properties for samples and / or sub-samples

- You can define in-situ properties to be noted via the **Edit properties** item of the Sample menu.
- Up to 2 values and 1 remark can be entered per property for each sample and/ or sub-sample.
- Click on  in the top toolbar to see a table of all samples with their properties and values.

### Add a stratigraphic layer

- You can create a stratigraphic layer based on the depths and descriptions of the samples taken, by clicking on  in the top toolbar.
- The layer always begins at the bottom depth of the previous layer.
- The layer ends:
  - At the top depth of the current sample or sub-sample if its **Description** is empty.
  - At the bottom depth of the current sample or sub-sample if it has a **Description**.
- A weighted average of the description of all samples and sub-samples found between the top and bottom of the layer is used to generated the layer.



## Describe the soils with the matrix

- The matrix is used to describe samples, sub-samples and stratigraphic layers.
- Select all descriptive elements and the textual description will be automatically generated.

### Category

- This is the main type of soil or rock. The drop-down list can be edited.
- The category can be presented in the style file in bold, italic, underline and/or capital letters.

### Material

- Select the proportions of clay, silt, sand and gravel with the option buttons, or
- Choose a unique material from the drop-down list.

### Presence, percentage and maximum diameter

- Add the % of each element in the text field.
- Check its box to see it in the description.

### Debris

- Add all debris.
- Use the type of list “+” to add up the debris.
- Check the box to see them in the description.

### Color, structure, inclusions, evidence of contamination

- The elements will be added to the description.
- Use the type of list “+” to add up the values.

### Soil characteristics

- Select one or two elements per characteristic.
- The elements are added to the description.
- The characteristics change based on the selections at the top of the matrix.
- Use a long press to see the definition of each element.
- Force Density or Consistency via the Cohesionless / Cohesive button at the top left.

**Description:** Category. Material (size), gradation, shape, color, oxidation, density / consistency, plasticity, moisture, calcareous. Structure. Presence (%) (list of debris). Inclusions. Evidence of contamination.

Cohesionless		Copy previous sample		No: 002		
Category Fill		SGM		123		
Prop.	%	Clay	Silt	Sand	Gravel	Presence (%)
Main	>35	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/> Dmax _____ mm
Adj.	>20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="checkbox"/> Cobbles _____ ▼
Some	>10	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/> Boulders _____ ▼
Trace	>1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/> Org. Mat. _____ ▼
<input type="checkbox"/> Debris						▼
Color		▼		Structure		▼
Inclusions						▼
Contamination						▼
Fill. Gravelly sand (fine to medium), some silt, compact, dry.						
▼ Sand	▼ Density	▼ Plasticity	▼ Moisture			
<input checked="" type="checkbox"/> Fine	<input type="checkbox"/> Very loose	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Dry			
<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Loose	<input type="checkbox"/> Low	<input type="checkbox"/> Damp			
<input type="checkbox"/> Coarse	<input checked="" type="checkbox"/> Compact	<input type="checkbox"/> Medium	<input type="checkbox"/> Moist			
▼ Gravel	<input type="checkbox"/> Dense	<input type="checkbox"/> High	<input type="checkbox"/> Wet			
<input type="checkbox"/> Fine	<input type="checkbox"/> Very dense	▷ Shape	▷ Calcareous			
<input type="checkbox"/> Coarse	N = 28	▷ Oxidation				
▷ Gradation						

💡 Use the top button to copy the information from previous record.

## 1 – Add or edit stratigraphic layers

- Swipe left from the Sample form, or
- Touch any stratigraphy column in the boring log, or
- Use the Lists of forms of the home screen.

💡 The layers can be created automatically via in the Sample form.

## 2 – Select the type of classification

- S: The Simplified type is used to define up to 6 materials constituting the layer. The matrix describes the simplified classification.
- R: The Rock type is used to describe manually a rock layer. The rock depth is copied in the ROCK\_DEPTH field of the BORING table.
- T: The Text type is used to add a remark at any depth without creating a layer.
- E: The End of boring type is used to describe the conditions of the end of boring.
- U: The Unified type is for the USCS classification (for future use).

## 3 – Enter the depths

- The top depth is always required. The bottom depth is only required for types S, R and U.

## 4 – Describe the stratigraphic layer

- Describe the stratigraphic layer with the soil description matrix via .



### 1 – Add piezometer installations

- Swipe left from the Stratigraphy form, or
- Touch any piezometer column in the boring log, or
- Use the Lists of forms of the home screen.

### 2 – Select the type of installation

- The piezometer can be open tube (or hydraulic), pneumatic, or electric (vibrating chord).
- The fields of the entry form differ based on the type of installation.

### 3 – Edit the piezometer number (if needed)

- The N° of the first piezometer is suggested as 1 and can be modified.

### 4 – Enter other information

- The installation date is entered automatically.
- Enter the bottom depth of the screen, its length and its diameter.
- Enter the length above ground (stick-up), or enter the inertia, or enter the calibration coefficients.

### 5 – Add the seals / sand packs via SEALS

- Enter the top and bottom depth of the material layer.
- Enter the code of the pattern to use in the log. The material will also be entered.

### 6 - Add the water levels via LEVELS

- The measurement date is suggested by default.
- Enter the **reading** in meters from the top of the tube, or in kPa, or in Digits.
- The water pressure and water level will be calculated.

	Top* (ft)	Bot.* (ft)	Symbol	Material
<input type="checkbox"/>	2.40	4.50	S	Sand
<input type="checkbox"/>	2.00	2.40	X	Bentonite
<input type="checkbox"/>	1.00	2.00	S	Sand
<input type="checkbox"/>	0.00	1.00	K	Crushed stone

### Select Generate report from the home menu

- A PDF file of the current log is generated, with Geotab as watermark.
- The file is named Site\_Boring\_Date-Time.pdf and is saved in the project folder.
- The file can be sent by email via the dialog box.

Use the icon of the home screen to open another boring and generated its PDF.

### 1 – Select Export project from the home menu

- This is to send some or all files of a project folder.
- The files will be zipped into Project\_date-time.zip for sending. A copy is kept in /Geotec/export.

### 2 – Select the project to export

- The current project is suggested. You can select any other folder present in /Geotec/data/ via the drop-down list.

### 3 – Select the files to export

- If the project has been exported previously, only the files modified since the last export are checked. The last export can be resent.
- If the project has never been exported, all files are selected.
- You can modify the file selection if needed.

### 4 - Enter the connection parameters

- The zip file can be sent to an FTP or FTPS account (implicit TLS) or by email. It can also be created and sent via another method.
- The connection parameters are saved if the corresponding box is checked.

With DBM on Windows, you can integrate all your data into the corporate database.