Geotec LAB

LICENSE

> 💡 Lab can be used in English or in French. Change the language via the **Style** menu.

1 - Open Lab

- Use the shortcut on your desktop or launch the program from Geotec\Bin folder.

2 – Enter your license identification (LID) provided by Sobek

- For a **trial** license, the LID starts with **T**.
- For an **individual** license, the LID starts with **W**.
- For a **removable** license, the LID starts with **R**.
- For a **network** license, the LID starts with **N**.

3 – License and software information

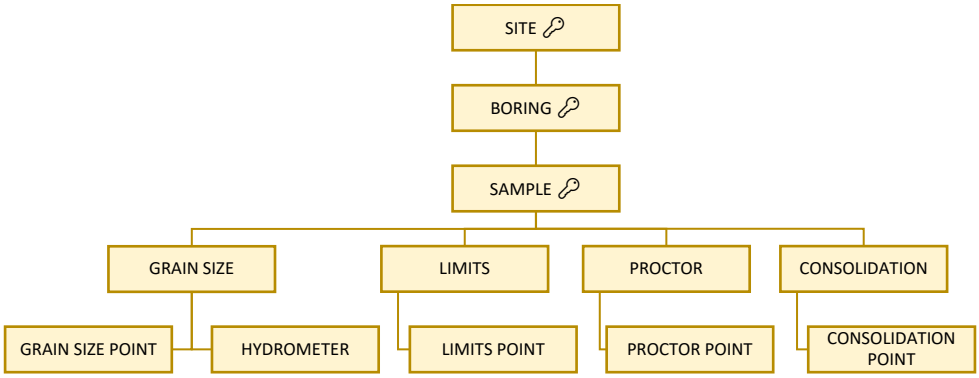
- From the menu bar, use **Help > License**.
  The window shows information about the license used.
- From the menu bar, use **Help > About**.
  The window shows information about the Geotec version installed.

REVIEW OF BASIC INFORMATION ABOUT GEOTEC

Lab is used to produce graphic reports for laboratory tests done on aggregates, both detailed reports for each test or summary reports for your projects. The reports are produced with the data available in the corporate database. See the ***Tutorial on Log*** for information about the definitions, graphic interface, characteristics of entry forms and data entry.

Database and data hierarchy

- The database is the file in which data is saved. The database contains all sites, borings, samples, laboratory tests, etc. Centralize all your data in one corporate database.
- The Geotec databases have a normalized structure of tables, fields and relationships between the tables – no table or field definition is done by the user. The databases are created via the DBM module.
- Each laboratory test is defined by its site-boring-sample combination, which must be unique in the database.



Style file

- This is the look of the presentation. The style file is a customizable graphic output independent from projects.
- Typical style files include one or multiple graphs as well as tables.
- Style files can be created for summary reports with multiple curves, for summary report for one test only, or for detailed report for validation in the lab.

Entry forms

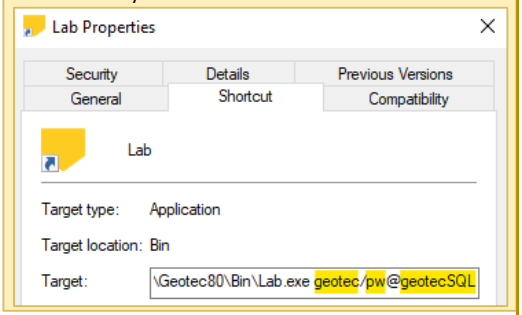
- Entry forms are integrated in all modules of Geotec to enter, modify, delete and view data. Entry forms include calculations, validations, default values and automations.
- Entry forms and calculations are available for the Grain size analysis and Hydrometer test, Atterberg limits and natural water content, Proctor test and Consolidation tests.
- Entry forms are also available for these lab tests: Swedish cone, specific gravity, density, unconfined compression, shear strength and concentrations of contaminants.
- Entry forms are used to retrieve data based on various criteria via the Query mode.

1 – Connect to the database

The database is the file in which data is saved. The same data can be used via any Geotec modules.

- Use or **File > Open Database** to open an Access or db3 database.
- Use or **File > Connect Database** to connect to an SQL Server or Oracle database and enter the username, password and ODBC connection alias provided by your IT.
- If you are doing a trial, open **Geotec_tutorial.mdb** in folder **\Geotec\Access**.
- The title bar shows the software name and the connected database between brackets as [DBMS: File] (Database version - Language).

Include the connection string in your shortcut to automatically connect to the last database used.



2 – Open a style file and logo

To validate the inputs and results more easily, open a style file designated for lab test (grain size, limits, etc.). Add your logo to your report.

- Use or **File > Open Style** to select another style file created via Lab. Several are provided with Geotec.
- Use **File > Recent Logos** and select a row to open your logo file. Make sure an image identified as $$logo exists (see *Objects and content tables* on page 11).

3 – Enter laboratory management data

The laboratory management data are defined once and saved in the database. They are specific to the lab and can be used for any project and any test done.

- Use Menu button of the horizontal toolbar or **Data > Entry > Entry Forms Menu**.
- Go to **Lab tests** tab
- Click the buttons under **Laboratory Management**

4 – Define samples if necessary

Each laboratory test is associated to a sample, which is defined by its site number, boring number and sample number. Verify that the sample already exists in the database, or define it.

- Open the Sample entry form via button of the horizontal toolbar.
- Use from the toolbar, or **[F7]**, or **Query > Enter**.
- Select the site number from the list. You can also select the boring number from the list to filter more.
- Use from the toolbar, or **[F8]**, or **Query > Execute**.
- All samples defined for the site (and boring) are retrieved. Use the big arrows to navigate through the samples.
- If the sample is not defined, add a new one with . You may need to add the site and / or boring if not already defined in the database. See the ***Tutorial on Log*** for a step-by-step of data entry.

5 - Enter laboratory test data

The laboratory test entry forms are opened via buttons of the horizontal toolbar, or **Data > Entry >**

- for **Grain Size**
- for **Proctor**
- for **Consolidation**
- for **Atterberg Limits**

SIEVING METHODS

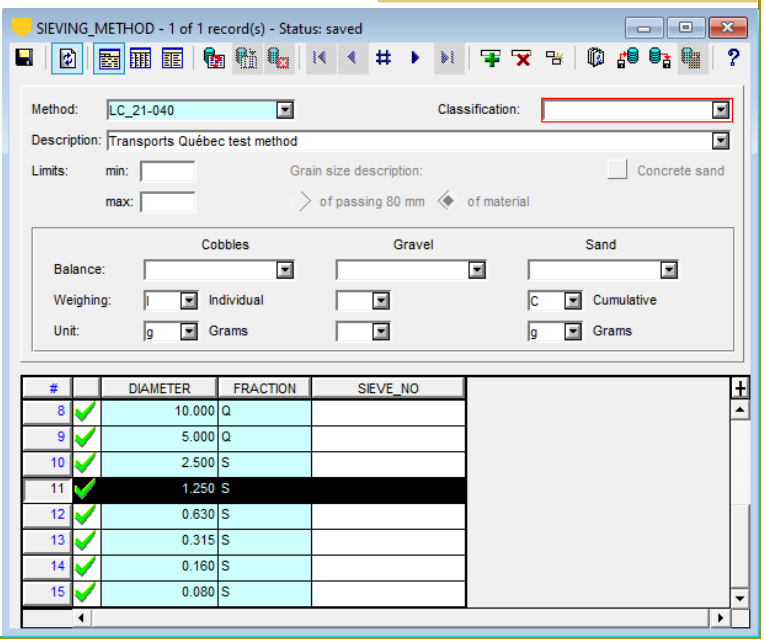
The sieving methods used in the laboratory and associated sets of sieves can be defined in the database. The sieving method used is selected for each grain size analysis.

> You can add sieving methods BNQ 2501-025 and LC 21-040 via DBM.

- Use Menu button of the horizontal toolbar or **Data > Entry > Entry Forms Menu**.
- Go to **Lab tests** tab
- Click **Sieving methods**
- You can view existing methods via a query with buttons **([F7])** and **([F8])**.

To add a new method, click .

- Enter the **sieving method** (typically the number of the standard).
- Up to **2 separations** can be defined (3 groups of sieves).
- For each applicable fraction, indicate the **weighing method** and the **unit.**
- In the table, add **each sieve diameter (in mm)** and indicate to which fraction it corresponds: Q for cobbles or coarse fraction, G for gravel or medium fraction, and S for sand or fine fraction.
- Save the method with and add another one if applicable.



SPECIFICATIONS

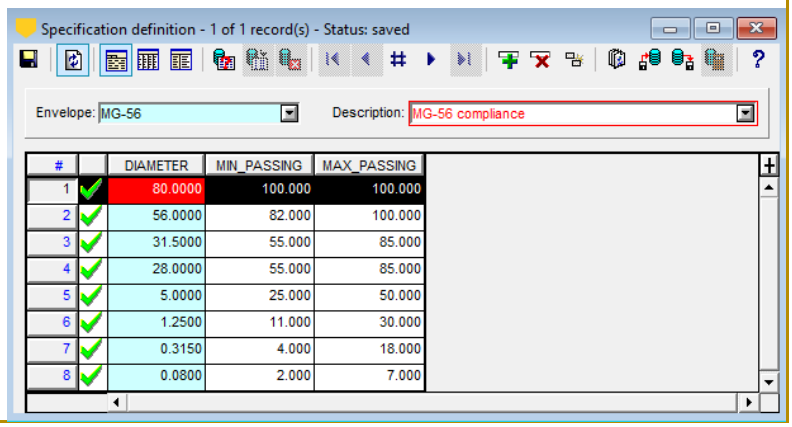
Grain size specifications can be associated with grain size tests. The compliance at each diameter where there is a requirement is calculated by Geotec. The specification can also be shown visually on the report.

> You can add grain size specifications MG-20, MG-20B, MG-56 and MG-80 via DBM.

- Use Menu button of the horizontal toolbar or **Data > Entry > Entry Forms Menu**.
- Go to **Lab tests** tab
- Click **Grain size requirements**
- You can view existing requirements via a query with buttons **([F7])** and **([F8])**.

To add a new specification, click .

- Enter the **envelope number**.
- In the table, indicate the **diameter** (in mm) where a requirement applies.
- Enter the **minimum** and **maximum passing** for each diameter.
- Save the specification with and add another one if applicable.



HYDROMETER CALIBRATIONS

Hydrometers used in the laboratory are calibrated. Their calibration factors are used in the calculations for the hydrometer test.

- Use Menu button of the horizontal toolbar or **Data > Entry > Entry Forms Menu**.
- Go to **Lab tests** tab, then **Hydrometer calibrations**
- You can view existing hydrometer calibrations via a query with buttons **([F7])** and **([F8])**.

To add a new hydrometer calibration, click .

- Enter the **hydrometer number**, the hydrometer **model** (151H or 152H) and the last **calibration date**.
- Enter the **length**, **volume** and **coefficients A** and **B** of the calibration curve.
- Enter **coefficients A** and **B** of **composite correction** curve.
- Enter **density correction**.
- Save the hydrometer calibration with and add another one if applicable.

> You can add the default calibration values for ASTM 151H and 152H hydrometers via DBM.

HYDROMETER CALIBRATIONS (continued)

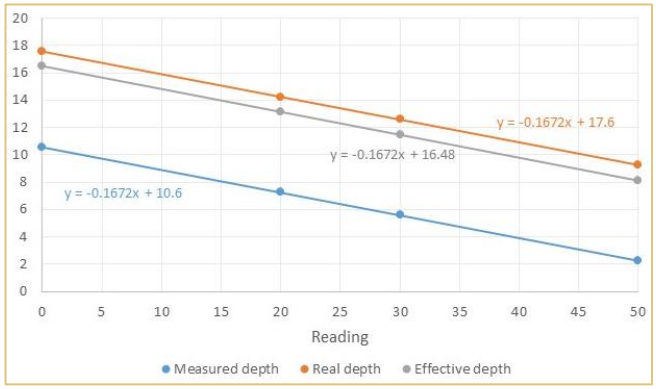
Calibration curve

It establishes the relationship between the distance (cm) and the reading taken on the hydrometer, at the top of the meniscus.

- The **measured depth L_1** is the distance from the reading mark on the hydrometer stem to the top of the hydrometer bulb.
- The **real depth H** is the distance from the reading mark on the hydrometer stem to the geometric center of the hydrometer bulb, or $H = L_1 + \frac{L_B}{2}$
- The **effective depth H'** is the real depth corrected for water displacement resulting from the insertion of the hydrometer in the suspension, or $H' = H - \frac{V_B}{2A} = L_1 + \frac{L_B}{2} - \frac{V_B}{2A}$
  where V_B is bulb volume (cm^3), A is sedimentation cylinder area (cm^2), L_B is bulb length (cm) and L_1 is measured depth (cm).

The different sets of values can be used as calibration. Below are the coefficients to enter for the example of the figure.

- If **measured depth** is used for calibration (**blue line**), enter coefficient A (-0.167), coefficient B (10.6), bulb volume (64 cm^3 in our example) and bulb length (14 cm).
- If **real depth** is used for calibration (**orange curve**), enter coefficient A (-0.167), coefficient B (17.6), bulb volume (64 cm^3 in our example) and bulb length of 0 (included in calibration).
- If **effective depth** is used for calibration (**gray curve**), enter coefficient A (-0.167), coefficient B (16.485), bulb volume of 0 (included in calibration) and bulb length of 0 (included in calibration).



Composite calibration

It is used to adjust for inaccuracies from the use of a dispersing agent, from hydrometers calibrated at 20°C and from readings at the top of the meniscus.

Prepare a solution of distilled water and dispersing agent in the same proportion as will be used in the sedimentation tests. At 2 sufficiently different temperatures, read the hydrometer at the top of the meniscus. For a 151H, the correction is the difference between the reading and one. For a 152H, it is the difference between the reading and zero. **Create a graph of correction with temperature** and set a straight-line relationship with equation y = Ax + B.

If composite calibration is not done, set A and B coefficients to 0. The correction will be entered by the user for each measurement.

Density correction factor

The **correction factor F for density** is used in the BNQ 2501-025 standard. Please refer to it. With a value of 1, the factor has no impact.

LAB EQUIPMENT

Lab equipment can be defined in the database. This ensures better monitoring in the event that an equipment is faulty, and speeds up the entry of equipment information such as dimensions.

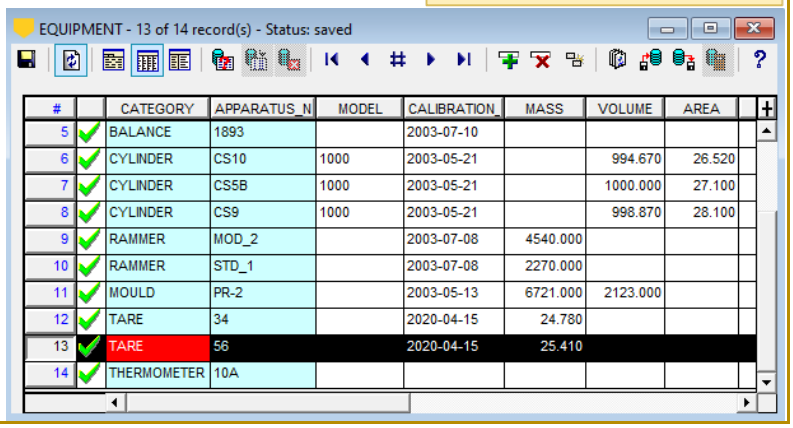
- Use Menu button of the horizontal toolbar or **Data > Entry > Entry Forms Menu**.
- Go to **Lab tests** tab
- Click **Lab equipment**
- You can view existing equipment via a query with buttons ([F7]) and ([F8]).

To add a new equipment, click .

- Enter the **category**. This is used to create field-specific drop-down lists in the entry forms.
- Enter the **apparatus number**.
- Enter all relevant information for each equipment (mass, volume, area, etc.).
- Save the equipment with and add another one if applicable.

These equipment categories are supported:

BALANCE	CYLINDER	TARE
RAMMER	MOULD	SIEVE
THERMOMETER		



#		CATEGORY	APPARATUS_N	MODEL	CALIBRATION_	MASS	VOLUME	AREA
5	✓	BALANCE	1893		2003-07-10			
6	✓	CYLINDER	CS10	1000	2003-05-21		994.670	26.520
7	✓	CYLINDER	CS5B	1000	2003-05-21		1000.000	27.100
8	✓	CYLINDER	CS9	1000	2003-05-21		998.870	28.100
9	✓	RAMMER	MOD_2		2003-07-08	4540.000		
10	✓	RAMMER	STD_1		2003-07-08	2270.000		
11	✓	MOULD	PR-2		2003-05-13	6721.000	2123.000	
12	✓	TARE	34		2020-04-15	24.780		
13	✓	TARE	56		2020-04-15	25.410		
14	✓	THERMOMETER	10A					

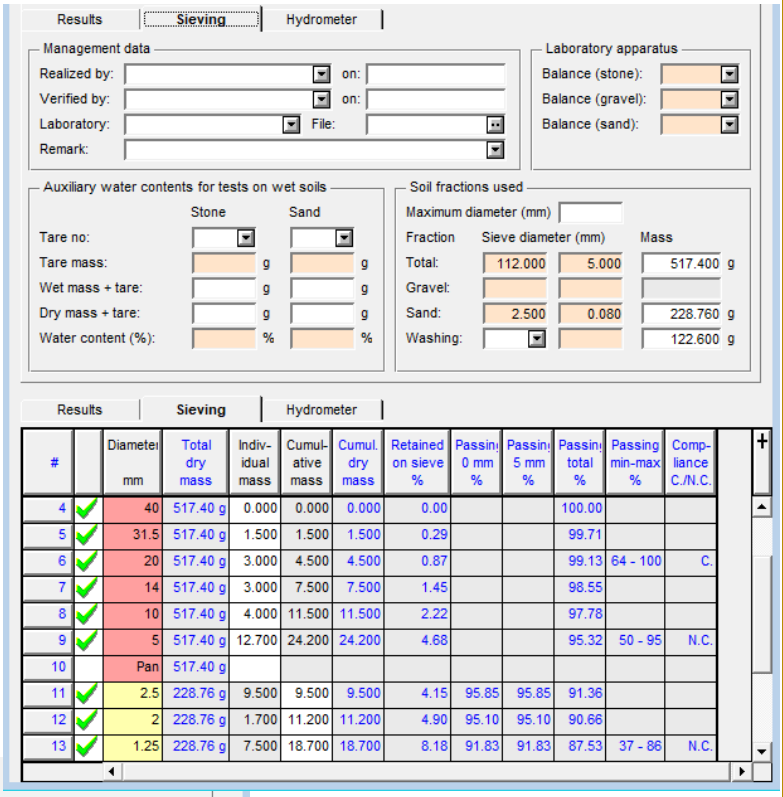
The lab measurements and results of grain size analysis are calculated in the Grain Size entry form.

- Open a style file showing grain size results via **File > Open Style**.
- Use Grain size button of the horizontal toolbar or **Data > Entry > Grain Size**.
- You can view existing grain size test via a query with buttons **([F7])** and **([F8])**.
- To add a new test, click . Select the site number, boring number and sample number on which the test was done.
- Select the sieving method used. The diameters defined in the sieving method are automatically generated in the bottom table.
- Select a specification if applicable.

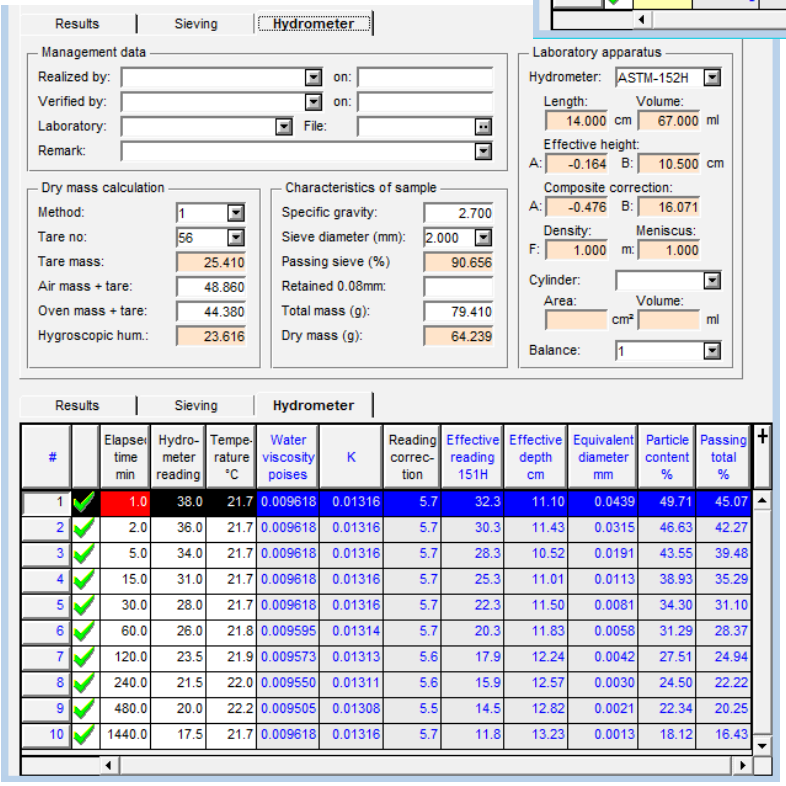
Sieving

Geotec will calculate the grain size curve based on sieving measurements.

- Click on **Sieving tab** at the top.
- Enter **the total mass of soil for each fraction**. The fractions and the minimum and maximum diameters are defined in the sieving method.
- Enter the **mass after washing** to calculate the loss percentage for test validity.
- Only if the test was done on wet soil, enter the auxiliary water content. Otherwise, leave empty.
- For each diameter, enter the **individual** or **cumulative mass** (defined in sieving method).
- **Calculate results** with .
- Go to the **Results tab** to view the passing percentages at each diameter (bottom table) and various results calculated by Geotec.



#		Diameter mm	Total dry mass	Individual mass	Cumulative mass	Cumul. dry mass	Retained on sieve %	Passing 0 mm %	Passing 5 mm %	Passing total %	Passing min-max %	Compliance C./N.C.
4	✓	40	517.40 g	0.000	0.000	0.000	0.00			100.00		
5	✓	31.5	517.40 g	1.500	1.500	1.500	0.29			99.71		
6	✓	20	517.40 g	3.000	4.500	4.500	0.87			99.13	64 - 100	C.
7	✓	14	517.40 g	3.000	7.500	7.500	1.45			98.55		
8	✓	10	517.40 g	4.000	11.500	11.500	2.22			97.78		
9	✓	5	517.40 g	12.700	24.200	24.200	4.68			95.32	50 - 95	N.C.
10		Pan	517.40 g									
11	✓	2.5	228.76 g	9.500	9.500	9.500	4.15	95.85	95.85	91.36		
12	✓	2	228.76 g	1.700	11.200	11.200	4.90	95.10	95.10	90.66		
13	✓	1.25	228.76 g	7.500	18.700	18.700	8.18	91.83	91.83	87.53	37 - 86	N.C.



#		Elapsed time min	Hydrometer reading	Temperature °C	Water viscosity poises	K	Reading correction	Effective reading 151H	Effective depth cm	Equivalent diameter mm	Particle content %	Passing total %
1	✓	1.0	38.0	21.7	0.009618	0.01316	5.7	32.3	11.10	0.0439	49.71	45.07
2	✓	2.0	36.0	21.7	0.009618	0.01316	5.7	30.3	11.43	0.0315	46.63	42.27
3	✓	5.0	34.0	21.7	0.009618	0.01316	5.7	28.3	10.52	0.0191	43.55	39.48
4	✓	15.0	31.0	21.7	0.009618	0.01316	5.7	25.3	11.01	0.0113	38.93	35.29
5	✓	30.0	28.0	21.7	0.009618	0.01316	5.7	22.3	11.50	0.0081	34.30	31.10
6	✓	60.0	26.0	21.8	0.009595	0.01314	5.7	20.3	11.83	0.0058	31.29	28.37
7	✓	120.0	23.5	21.9	0.009573	0.01313	5.6	17.9	12.24	0.0042	27.51	24.94
8	✓	240.0	21.5	22.0	0.009550	0.01311	5.6	15.9	12.57	0.0030	24.50	22.22
9	✓	480.0	20.0	22.2	0.009505	0.01308	5.5	14.5	12.82	0.0021	22.34	20.25
10	✓	1440.0	17.5	21.7	0.009618	0.01316	5.7	11.8	13.23	0.0013	18.12	16.43

Hydrometer

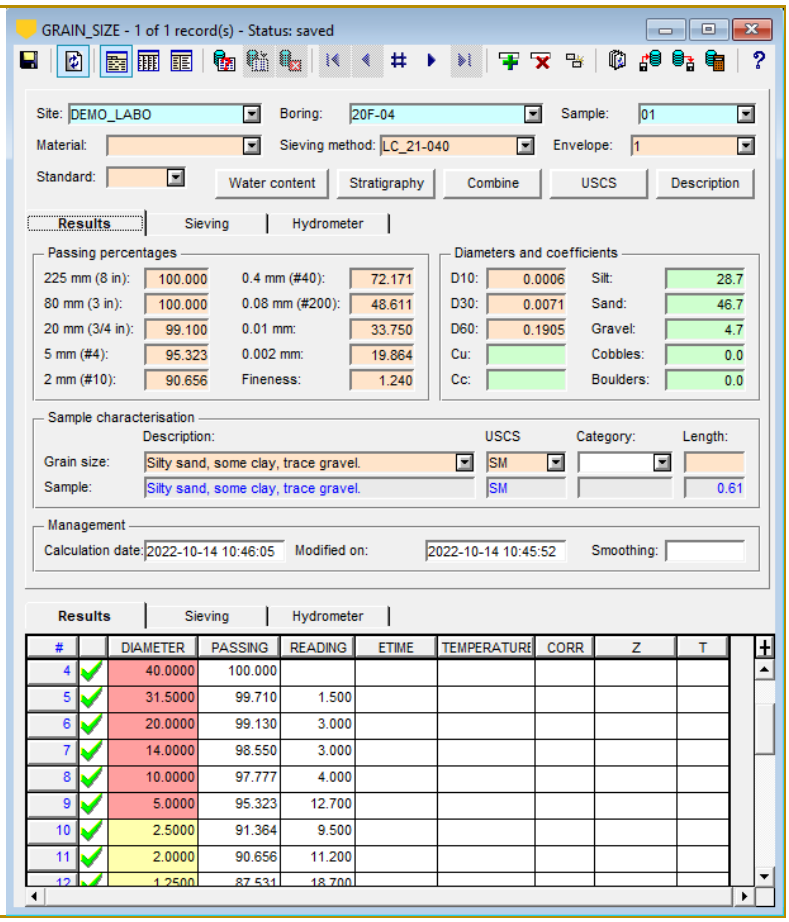
Geotec will calculate grain size curve and include the sedimentation analysis.

- Click on **Hydrometer tab** at the top.
- Select the **hydrometer** and **cylinder** used. See *hydrometer calibrations.*
- Adjust the **specific gravity**.
- Enter the **sieve diameter**. Geotec retrieves the corresponding passing percentage.
- Enter the **dry mass** of the sample. You can use the dry mass calculation.
- In the bottom table, enter the **hydrometer reading** and the **temperature** at corresponding times (in minutes). If a measurement was not taken at a certain time, skip it.
- If the composite correction coefficients are 0, enter the **reading correction**. Otherwise, it is calculated by Geotec.
- **Calculate results** with .
- Go to the **Results tab** to view the passing percentages at each diameter (bottom table) and various results calculated by Geotec.

Passing percentages

If passing percentages at each diameter are already calculated (for both sieving and hydrometer test), it is possible to enter them directly without the lab measurements.

- Go to **Results tab**
- In the bottom table, enter the **passing percentage at each diameter**, starting at 100%.
- **Calculate results** with .



The lab measurements and results of water content and liquid and plastic limits tests are calculated in the Limits entry form.

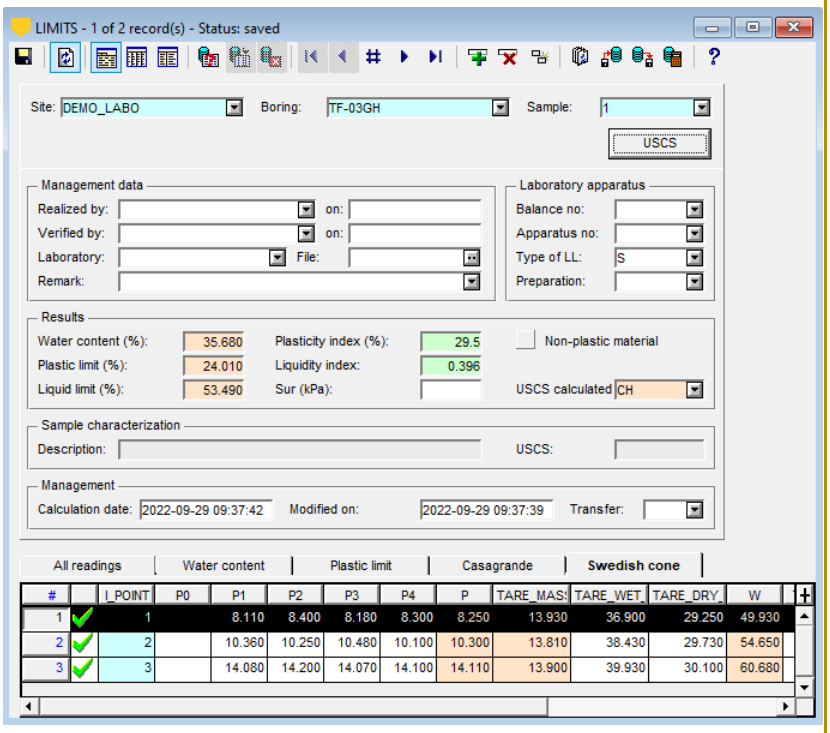
- Open a style file showing limits results or an Atterberg chart via **File > Open Style**.
- Use Limits button of the horizontal toolbar or **Data > Entry > Atterberg Limits**.
- You can view existing limits via a query with buttons **([F7])** and **([F8])**.
- To add a new test, click . Select the site number, boring number and sample number on which the test was done.

Natural water content

- Click on **Water content tab** in the table.
- Enter the **tare mass**, **tare + wet soil mass** and **tare + dry soil mass**. Water content gets calculated.
- Add another row (I_POINT of 2, 3, etc.) if more than one measurement is done on the same sample.
- The water content in the **Results** gets calculated by Geotec.

Plastic limit

- Click on **Plastic limit tab** in the table.
- Enter the **tare mass**, **tare + wet soil mass** and **tare + dry soil mass**. Water content gets calculated.
- Add another row (I_POINT of 2, 3, etc.) if more than one measurement is done on the same sample.
- The plastic limit in the **Results** gets calculated by Geotec.



Liquid limit (Casagrande)

If the liquid limit test was done with the Casagrande apparatus…

- Click on **Casagrande tab** in the table.
- Enter the **tare mass**, **tare + wet soil mass** and **tare + dry soil mass**. Water content gets calculated.
- Enter the **number of blows**.
- If doing the multipoint method, add another row (I_POINT of 2, 3, etc.)
- The liquid limit in the **Results** gets calculated by Geotec where N = 25 or via the one-point method equation.

Liquid limit (Swedish cone)

If the liquid limit test was done with the Swedish cone…

- Click on **Swedish cone tab** in the table.
- Enter the **tare mass**, **tare + wet soil mass** and **tare + dry soil mass**. Water content gets calculated.
- Enter the **penetration readings P1** to **P4**. It is also possible to enter the initial reading P0.
- The average penetration is calculated by Geotec. P0 is subtracted from Px if entered.
- If doing the multipoint method, add another row (I_POINT of 2, 3, etc.)
- The liquid limit in the **Results** gets calculated by Geotec where P = 10 or via the one-point method equation.

Results

If the values of water content, plastic limit and liquid limit are already calculated, it is possible to enter them directly without the lab measurements.

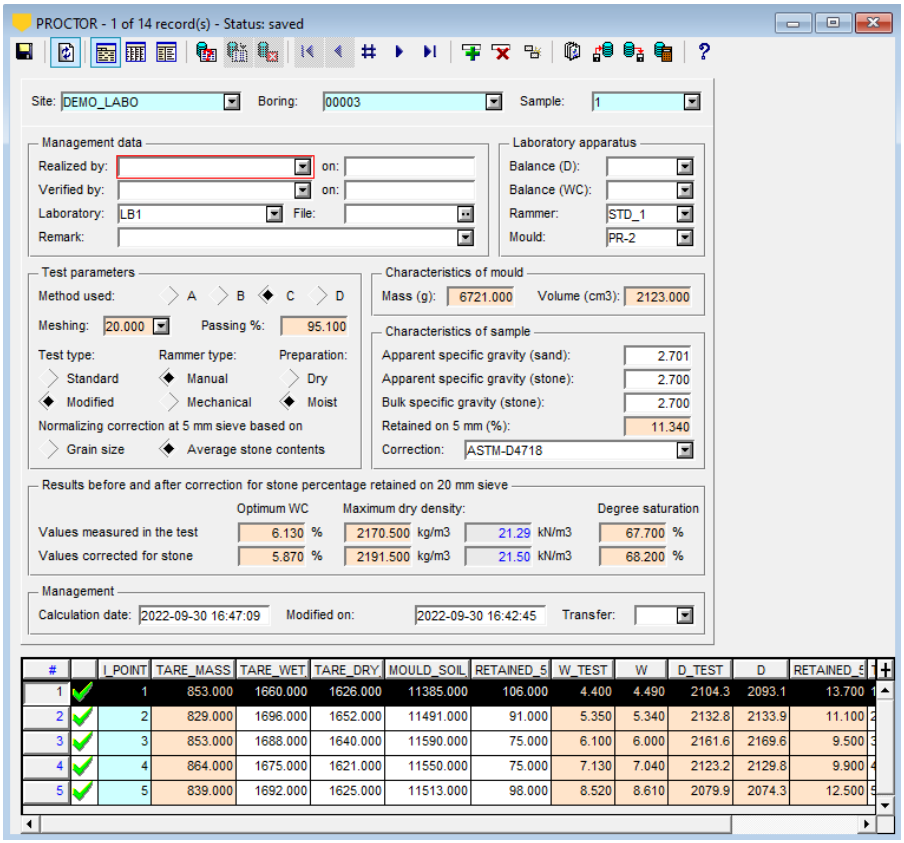
- Go to **Results** section.
- Enter the values. **Plasticity index** and **liquidity index** are calculated by Geotec.
- Click on to **calculate the USCS**.

The lab measurements and results of Proctor tests are calculated in the Proctor entry form.

- Open a style file showing Proctor compaction results via **File > Open Style**.
- Use Proctor button of the horizontal toolbar or **Data > Entry > Proctor**.
- You can view existing Proctor tests via a query with buttons **([F7])** and **([F8])**.
- To add a new test, click . Select the site number, boring number and sample number on which the test was done.

Lab measurements

- Select the **test method**. Passing % is calculated by Geotec from the grain size curve done for the same sample.
- To apply a **normalizing correction at 5 mm**, select the correction to use. A retained % on 5 mm must also be entered for each point.
- Select the **rammer** and **mould** number. The mould mass and volume are used in calculations.
- Adjust the **specific gravities.**
- In the bottom table, enter the **tare mass**, **tare + wet soil mass**, **tare + dry soil mass** and **mould + wet soil mass**. Water content and density get calculated.
- Enter the **mass retained on 5 mm**, if measured. The corresponding % gets calculated.
- Add another row (I_POINT of 2, 3, etc.) for each point of the curve.
- **Calculate results** with .
- The optimum water content and maximum dry density for the test are calculated.
- The optimum corrected for stone content is calculated and differs only if % passing is less than 100%.



Results

If the values of water content and density for each point of the curve are already calculated, it is possible to enter them directly without the lab measurements.

- Go to the bottom table.
- Enter **D** and **W values**.
- Click on to **calculate the optimum** and other results as described above.

The lab measurements and results of consolidation tests are calculated in the Consolidation entry form.

- Open a style file showing consolidation results via **File > Open Style**.
- Use Consolidation button of the horizontal toolbar or **Data > Entry > Consolidation**.
- You can view existing consolidation tests via a query with buttons (**[F7]**) and (**[F8]**).
- To add a new test, click . Select the site number, boring number and sample number on which the test was done.

Consolidation test

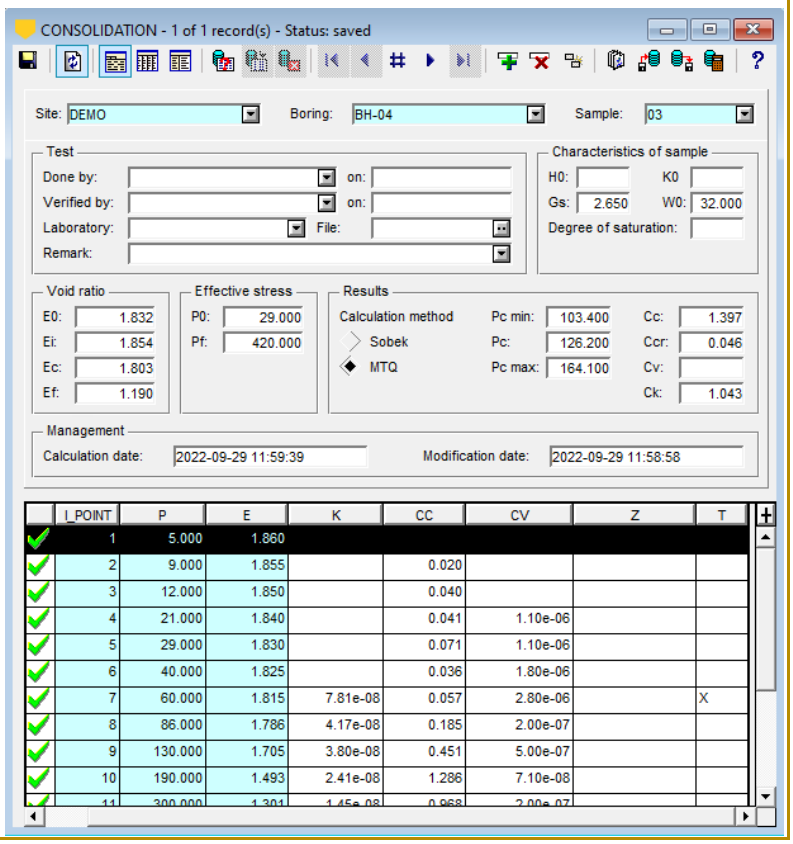
The Casagrande construction is used for the calculations.

- Enter the **in-situ effective stress P0**.
- Select the **calculation method**. **Sobek** is the simplified method, **MTQ** follows the LC22-301 standard.
- In the bottom table, enter the **pressure** and the **void ratio** for each point (I_POINT).
- Add rows for the entire consolidation curve.
- The compression index per loading is calculated (CC).
- **Calculate results** with .
- The voids radios, effective stress at end of testing and Pc min, Pc, Pc max and coefficients are calculated.
- Cv is not calculated in this version.

Permeability test

If an odometer permeability test was done

- Enter the **permeability** in m/s at different loadings.
- Click on to **calculate the Ck coefficient**.



I_POINT	P	E	K	CC	CV	Z	T
1	5.000	1.860					
2	9.000	1.855		0.020			
3	12.000	1.850		0.040			
4	21.000	1.840		0.041	1.10e-06		
5	29.000	1.830		0.071	1.10e-06		
6	40.000	1.825		0.036	1.80e-06		
7	60.000	1.815	7.81e-08	0.057	2.80e-06		X
8	86.000	1.786	4.17e-08	0.185	2.00e-07		
9	130.000	1.705	3.80e-08	0.451	5.00e-07		
10	190.000	1.493	2.41e-08	1.286	7.10e-08		
11	300.000	1.301	1.45e-08	0.968	2.00e-07		

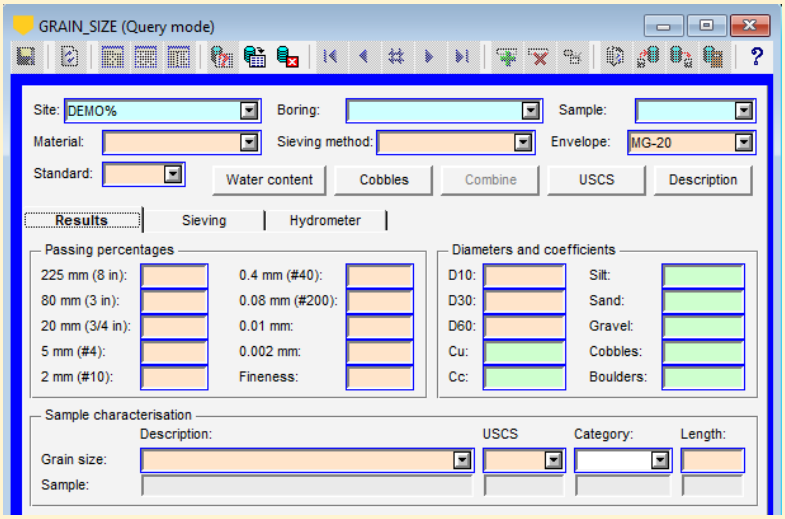
REVIEWING REPORTS and PRINTING

In all entry forms of Geotec, queries can be done to retrieve data from the database using various criteria. Their purpose is to filter the records in the database in order to consult, edit, complete, print or delete them.

Retrieve information and view graphic output

To review a report:

- Open the desired style file (look of the presentation) via or **File > Open Style**. Several examples of style files are available in the \Style folder of Geotec.
- Open the entry form of the specific lab test with buttons , or the Sample form with .
- Use from the toolbar, or **[F7]**, or **Query > Enter**.
- Enter the criteria for filtering. It can be the site number and / or the boring number, a specific management information, etc. See section *QUERY and DATA RETRIEVAL* in the ***Tutorial on Log*** for more details.
- Use from the toolbar, or **[F8]**, or **Query > Execute**.
- All records that correspond to the criteria entered are retrieved and their graphic output shown. Use arrows to navigate through the records.

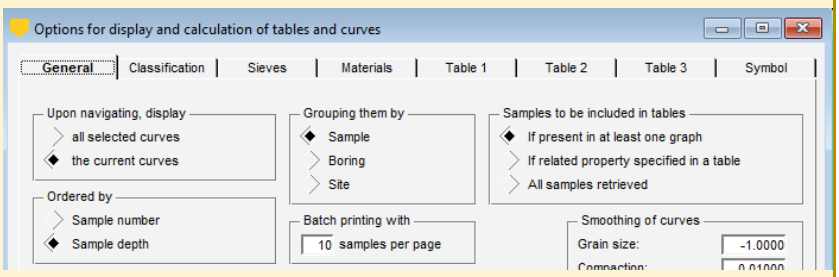


Define display and printing options

Options are available in Lab to define the display mode after queries, the batch printing parameters and the samples to include in summary tables.

> The query above will retrieve all grain size records where these criteria apply:
> - The Site number starts with *DEMO*
> - The specification associated is *MG-20*.

- Click in the Lab horizontal toolbar, or **Style > Options** and go to **General** tab.
- Use the first two options to define which curves from the query are displayed in the graph.
  - With **display all selected curves**, all curves retrieved are shown at once in the graph.
    When navigating through the records, if **grouped by sample**, each curve is highlighted in red one by one. If **grouped by boring**, all curves from the same boring are highlighted in red. Same logic for **grouped by site**.
  - With **display current curves**, only the curves corresponding to the current group are shown.
    If **grouped by sample**, one curve at a time is displayed. If **grouped by boring**, all curves from a boring are shown. Same logic for **grouped by site**. You can navigate through the records.



- If summary tables are shown in the style files (see *editing the style files*), decide which **samples to include in the tables**.
- If summary tables are shown, **order the samples** from top to bottom by **number** or by **depth**.
- For batch printing, enter the **maximum number of samples** per page.

Printing

> To batch print, select **all selected curves** in the options.

To print a report…

- Execute a query to retrieve your graphic report(s)
- Verify the printer setup via **File > Printer Setup**
- Verify the margins via **Style > Page** under Printer tab
- Print with **File > Print**. If a PDF printer is used, file name suggested is site_boring_sample.pdf.
- If printing multiple files at once (batch printing), in the message, select to print everything on one page (Same), or on multiple pages based on the maximum number of samples per page (Groups).

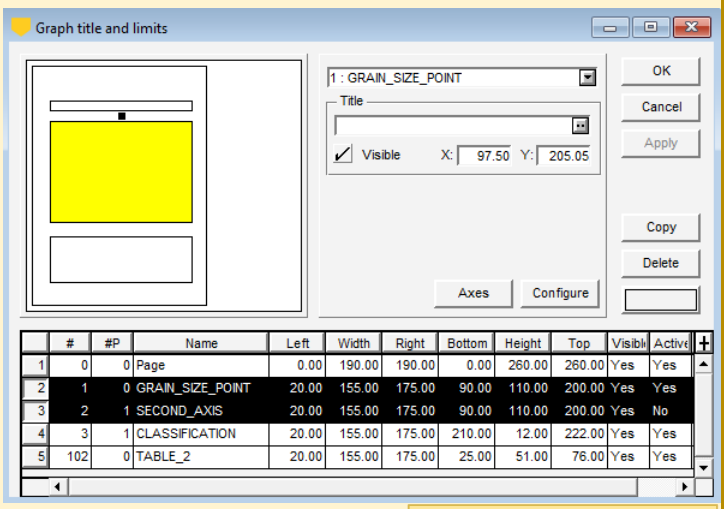
EDITING THE STYLE FILES

The look of the presentation is saved in the style file, which can be reused for any project. In Lab, style files typically include one or multiple graphs as well as summary tables, test tables and objects or tables of content. Example style files can be found in the \Style folder of Geotec.

Graphics

A graphic output can be added to show: the grain size curve, Proctor curve, consolidation curve, permeability curve, Atterberg chart, Houston-Mitchell chart, or liquid limit charts to determine liquid limit.

- Use  in the vertical toolbar, or **Style > Graphs**.
- Add a row with number between 1 and 99 and #P of 0.
- Select the graph name from the NAME column. The configuration is automatic based on the graph selected.
- Define its position with left, width, right, top, height and bottom (in mm, with respect to bottom left corner of page).
- The limits and formatting of the X and Y axes can be customized via the Axes button.



	#	#P	Name	Left	Width	Right	Bottom	Height	Top	Visibl	Active
1	0	0	Page	0.00	190.00	190.00	0.00	260.00	260.00	Yes	Yes
2	1	0	GRAIN_SIZE_POINT	20.00	155.00	175.00	90.00	110.00	200.00	Yes	Yes
3	2	1	SECOND_AXIS	20.00	155.00	175.00	90.00	110.00	200.00	Yes	No
4	3	1	CLASSIFICATION	20.00	155.00	175.00	210.00	12.00	222.00	Yes	Yes
5	102	0	TABLE_2	20.00	155.00	175.00	25.00	51.00	76.00	Yes	Yes

Summary tables

Up to 3 tables of results can be added in the style file, as well as a CLASSIFICATION table, for grain size curves. The tables will be filled with information related to each curve displayed in the graphic.

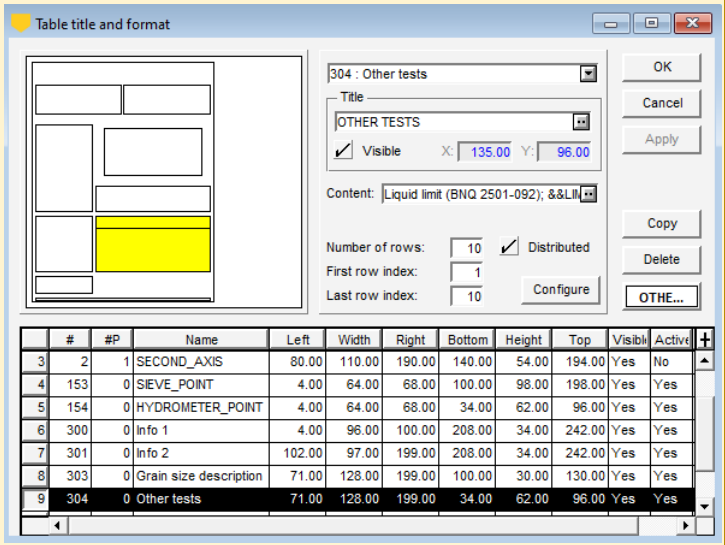
For grain sizes, SECOND_AXIS can be added to show passing and retained %.

- Follow the same steps as for graphics to add them and define their position (see above).
- Set their number between 100 and 199.
- Click  in the Lab horizontal toolbar, or **Style > Options** to edit their configuration.
  - Go to **Classification** tab to define the maximum diameters and label of the main and secondary soil divisions (for grain sizes)
  - Go to **Table x** to configure the columns of each table.
  - Select the table and field to display from the Geotec database – it can be from any table related to sample
  - Add the heading label and set the width proportion
  - Results specific to the test can also be selected from the Table and Field cells.

Detailed test tables

Tables showing detailed test data can also be added for validation.

- Follow the same steps as for graphics to add them and define their position (see above).
- Set their number between 100 and 199.
- Select the table from which data will be presented from the drop-down list.
- Via Configure, edit the fields to present by Hiding the unnecessary ones.



	#	#P	Name	Left	Width	Right	Bottom	Height	Top	Visibl	Active
3	2	1	SECOND_AXIS	80.00	110.00	190.00	140.00	54.00	194.00	Yes	No
4	153	0	SIEVE_POINT	4.00	64.00	68.00	100.00	98.00	198.00	Yes	Yes
5	154	0	HYDROMETER_POINT	4.00	64.00	68.00	34.00	62.00	96.00	Yes	Yes
6	300	0	Info 1	4.00	96.00	100.00	208.00	34.00	242.00	Yes	Yes
7	301	0	Info 2	102.00	97.00	199.00	208.00	34.00	242.00	Yes	Yes
8	303	0	Grain size description	71.00	128.00	199.00	100.00	30.00	130.00	Yes	Yes
9	304	0	Other tests	71.00	128.00	199.00	34.00	62.00	96.00	Yes	Yes

Objects and content tables

Add objects or content tables to show information specific to the sample shown.

- Use  in the vertical toolbar, or **Style > Object Mode**.
- Use the objects horizontal toolbar to add new objects.
- Edit any object with a dotted line with a double-click, or **right click > Properties**.
- Use **&&TABLE.FIELD** to show a field value or **$$keyword** to show a keyword suggested by Geotec like database, style, date, etc.
- Add an image linked to a logo file.

Content tables are objects formatted as tables, with defined columns and specified number of rows.

- In Object mode, click Create a table, and draw with the mouse where the table will be positioned. A table with #300 and up is created.
- Add the content, with columns separated by a semi-colon.
- Edit the number of rows to show.
- Via Configure or in Object mode, edit each column heading and width.

SUMMARY

LICENSE 1
REVIEW OF BASIC INFORMATION ABOUT GEOTEC 1
GETTING STARTED 2
SIEVING METHODS 3
SPECIFICATIONS 3
HYDROMETER CALIBRATIONS 3
HYDROMETER CALIBRATIONS (continued) 4
LAB EQUIPMENT 4
DATA ENTRY – GRAIN SIZE ANALYSIS 5
DATA ENTRY – GRAIN SIZE ANALYSIS (continued) 6
DATA ENTRY – NATURAL WATER CONTENT AND ATTERBERG LIMITS 7
DATA ENTRY – PROCTOR TEST 8
DATA ENTRY – CONSOLIDATION TEST 9
REVIEWING REPORTS and PRINTING 10
EDITING THE STYLE FILES 11
CONTACT US 12

CONTACT US

At Sobek, we are committed to providing a technical support that exceeds your expectations.
Our team of specialists will gladly answer your questions or comments.

Technical Support and Training

support@sobek-technologies.com

Sales and General Information

Geneviève Lessard: genevieve@sobek-technologies.com or 514 285-4873

Geotechnical Development

Ghislain Lessard: lessard@sobek-technologies.com or 514 285-5511

Geotec

sobek-technologies.com/en