

CLUETool Loader



User Guide

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Software Purpose

The Software is designed to load data to the POSC Epicentre database.

The main operations performed by the software are:

- loading input data to the database;
- unloading the loaded data;
- updating the loaded data;
- selective removal of the loaded data.

A user of CLUETool doesn't have to be an IT specialist in databases and data management. With the help of CLUETool Editor a specialist in geological and geophysical sciences can create datasets for data loading including fields of different types, QC criteria for input data and many other things. The Tool is based upon simple ER-diagrams and a fully documented POSC Epicentre dictionary with enough diagrams and illustrations of entities and their attributes.

CLUETool Loader includes a set of built-in templates and forms for interactive data input and preliminary batch processing. It is a huge amount of acquired experience in exploration and development data QC (analysis of seismic, wells, recovery, reservoir etc.). Forms of CLUETool are adapted to international standards for a wide variety of business-objects and their properties.

CLUETool has been created on the basis of modern technologies and can be integrated with various data loading applications.

Main characteristics:

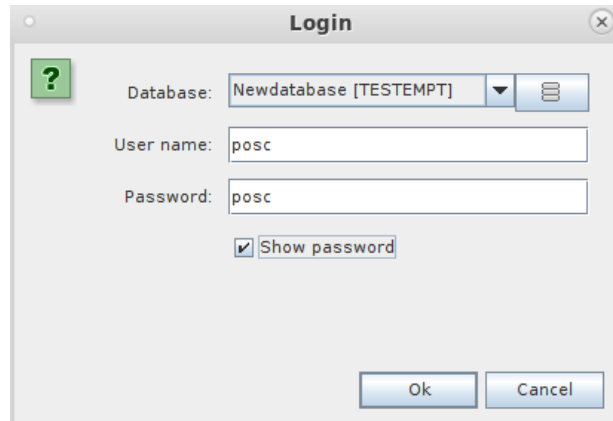
- includes a set of modules necessary for data modeling, defining QC and data loading;
- includes a big amount of built-in templates/forms and QC restrictions for objects and streams of data from exploration and production (E&P);
- supports Oracle (11g R2+) and Postgresql (9.0+);
- requires Linux OS (RHEL5/RHEL6/RHEL7) or Windows (7+) to work.

Key benefits:

- allows to manage exploration and production data and national data storage;
- does not require any additional software to prepare data but can be integrated with any of it;
- intuitive user interface based on years of experience in exploration and production in the oil and gas sector.

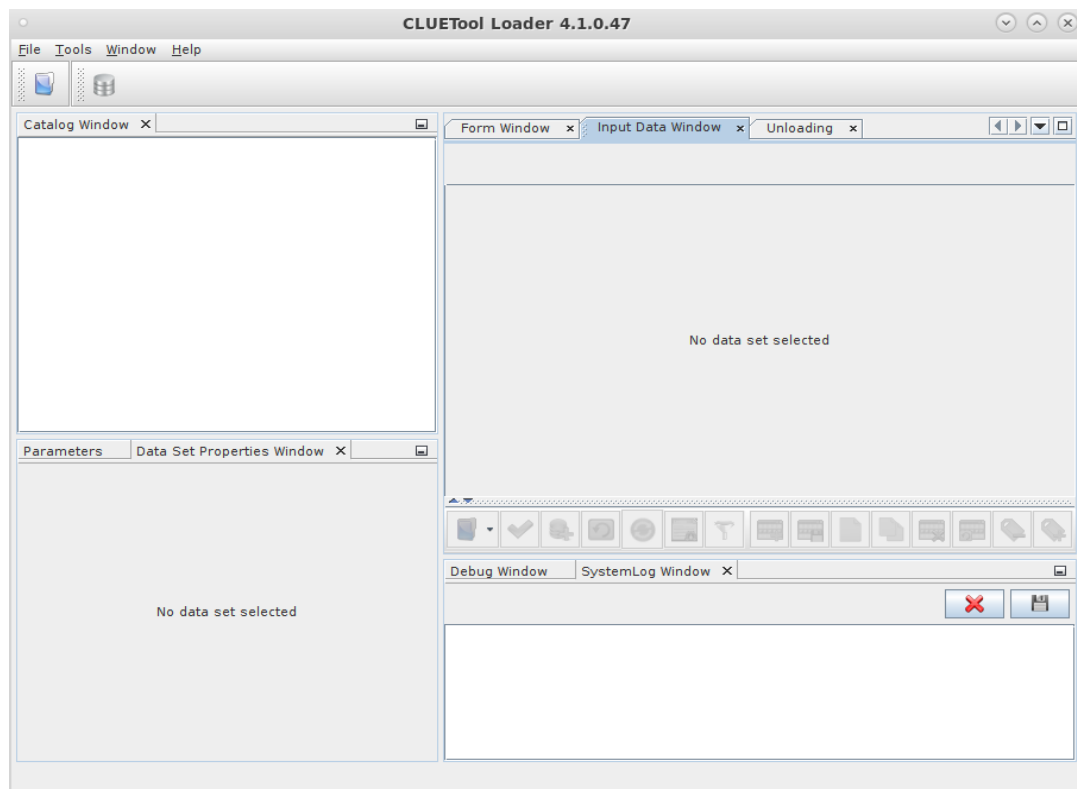
Launching CLUETool Loader

When launching the application, the first thing the user sees is an authorization interface. It is necessary to enter an appropriate username and password.



Launching CLUETool Loader

If you are a registered user and have entered the username and password correctly, you will see the CLUETool Loader working window.



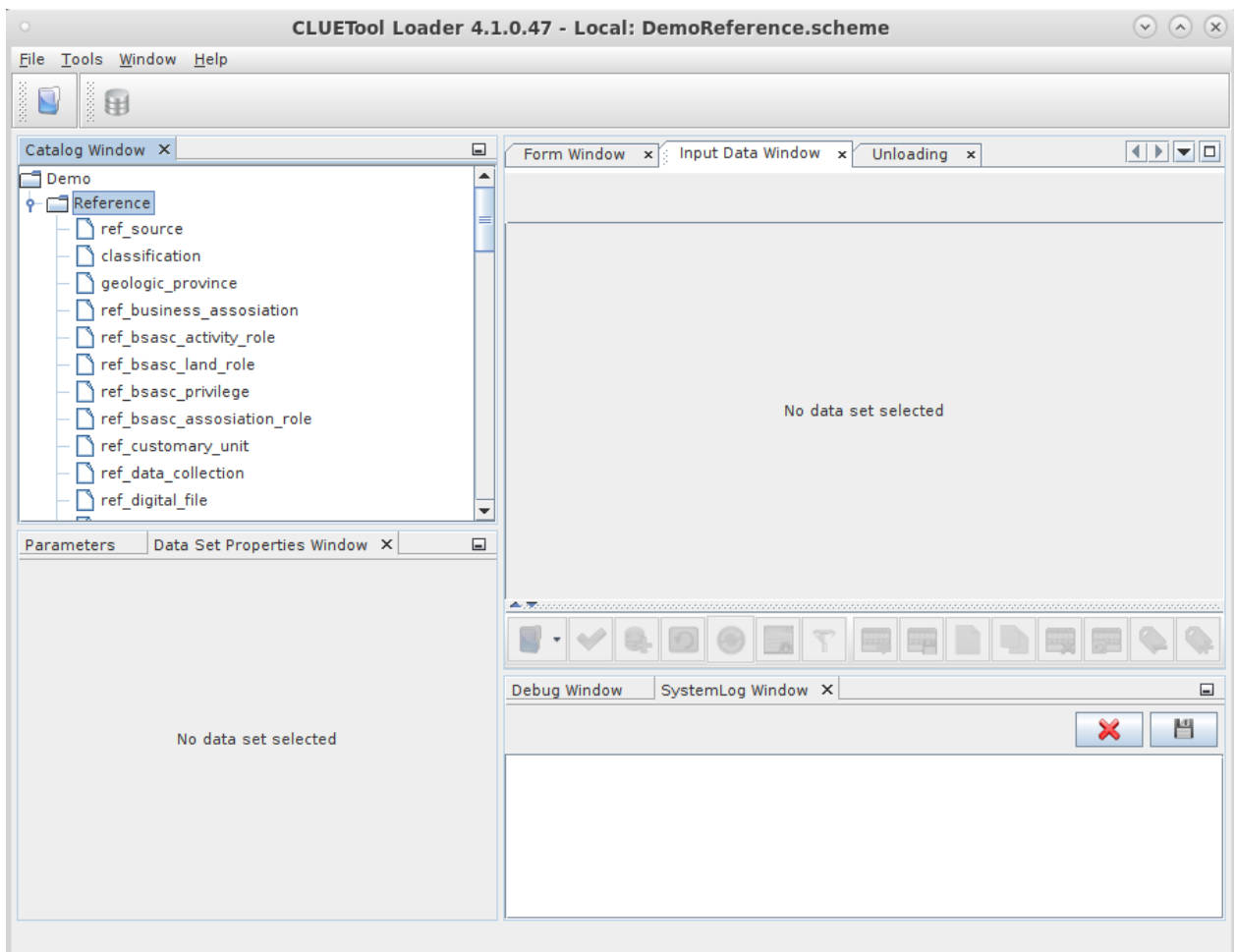
CLUETool Loader main window

Application Interface

INTERFACE OVERVIEW

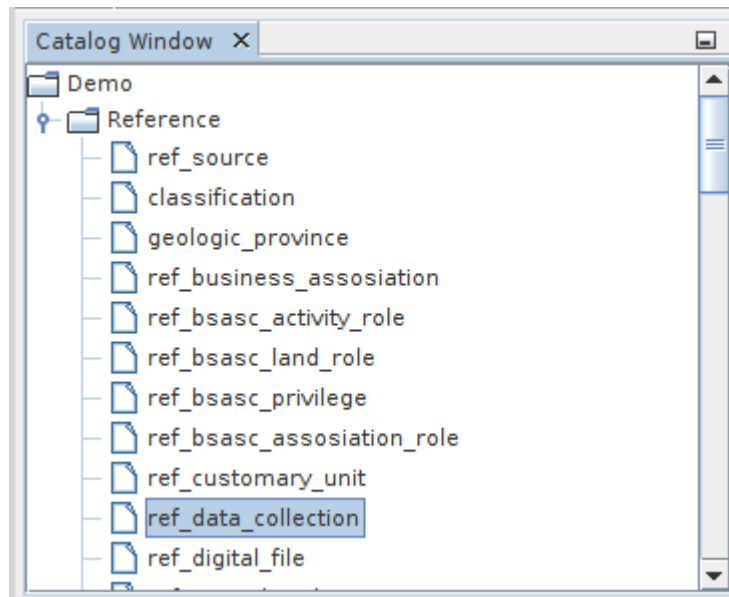
The interface of the application consists of dynamically generated panels. In case if any of the panels is not needed, it can be minimized or closed for the current session. It can be turned on again from the *Panel* menu item.

For the convenience of using the application, each control element is provided with a hint. In order to see a hint you need to hover and hold the mouse cursor over the desired button.



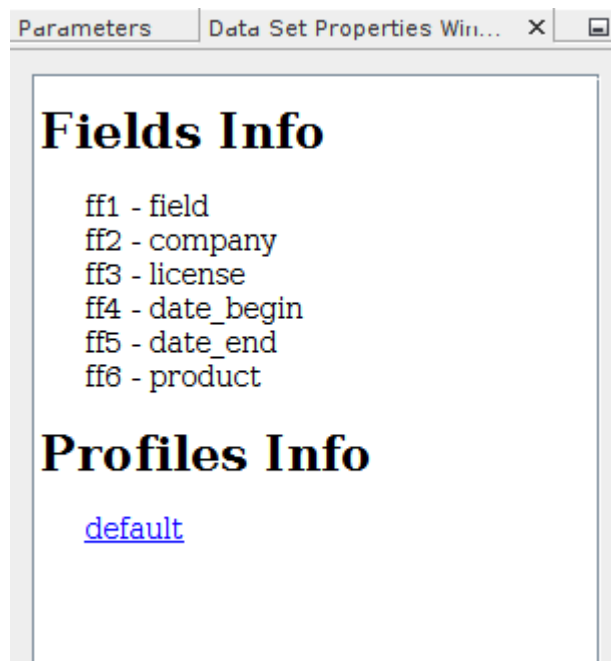
General view of the panels

“Catalog” menu is responsible for displaying all available download templates. You can expand/collapse a group node by double-clicking the mouse or by clicking on the icon.



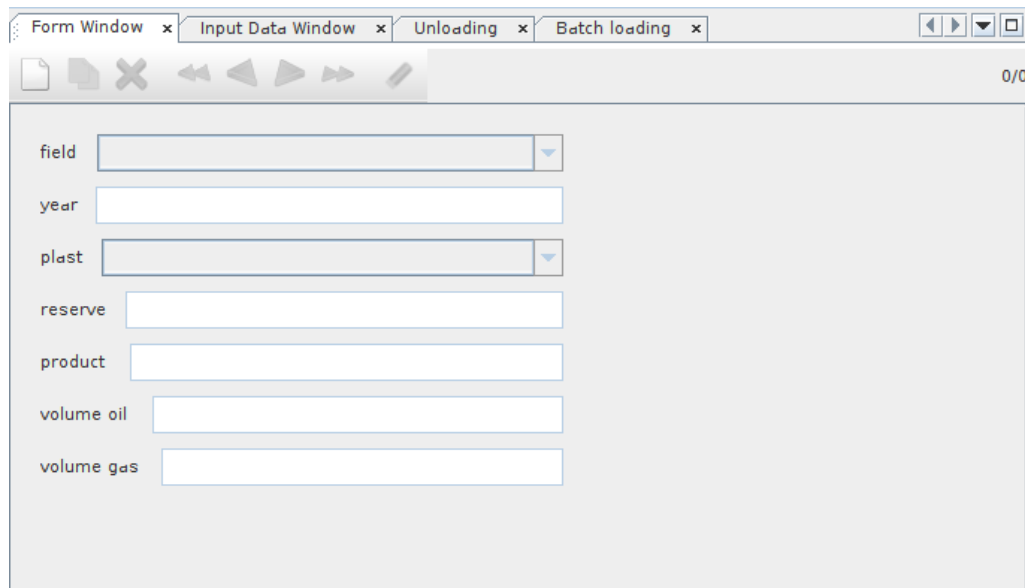
“Catalog” Panel

The **“Dataset Properties”** panel displays the properties of the dataset selected in the catalog.



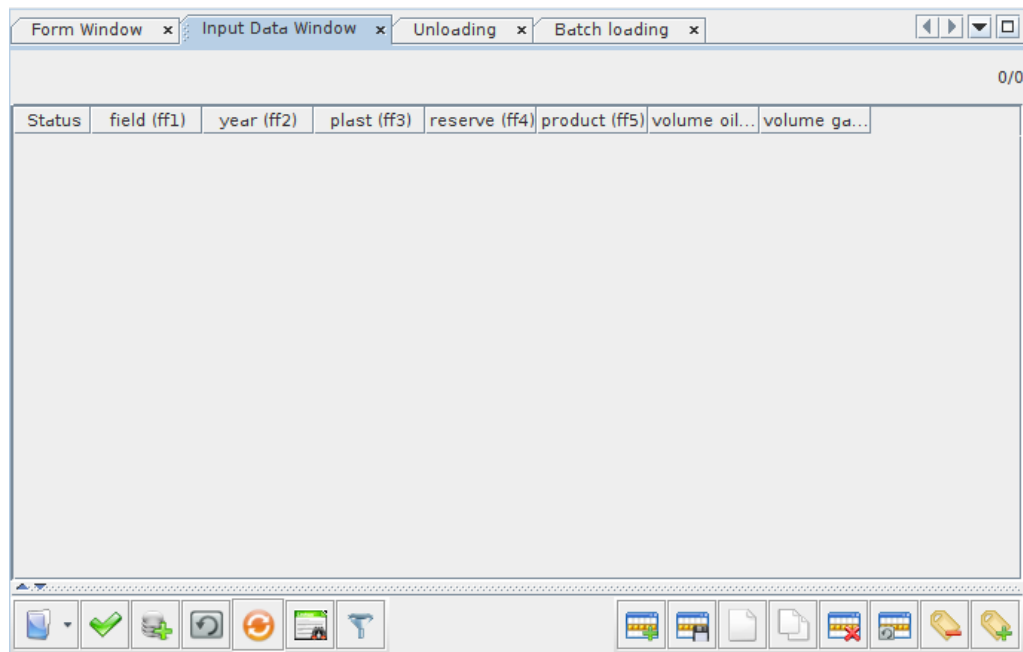
“Dataset Properties” panel

The **“Form”** panel contains a form for entering values into data record fields.



“Form” panel

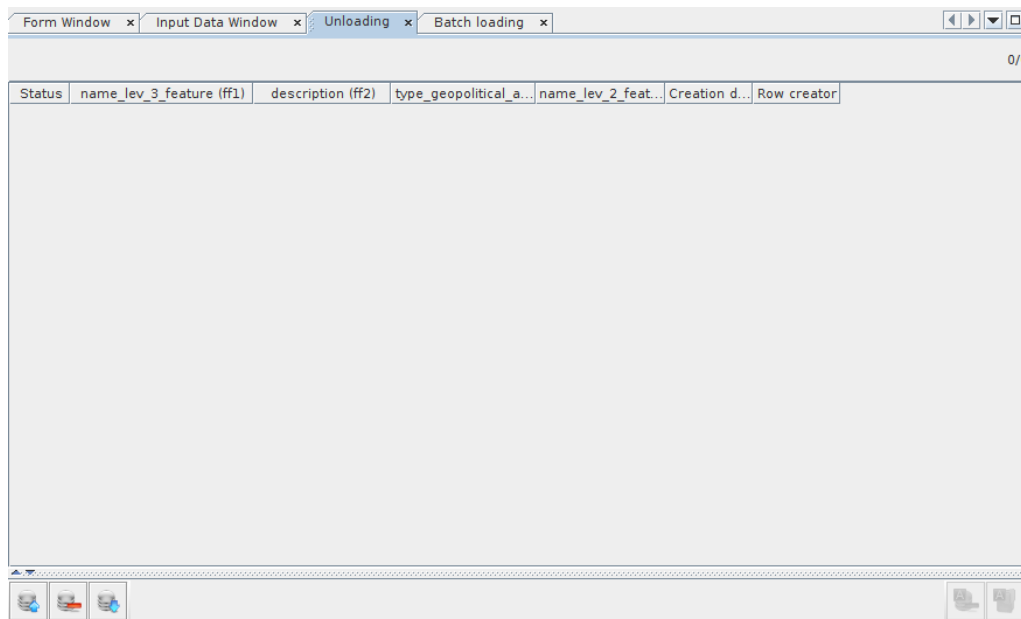
In the **“Input Data”** panel there is a table containing the rows that will be loaded to the database.



Status	field (ff1)	year (ff2)	plast (ff3)	reserve (ff4)	product (ff5)	volume oil...	volume ga...
--------	-------------	------------	-------------	---------------	---------------	---------------	--------------

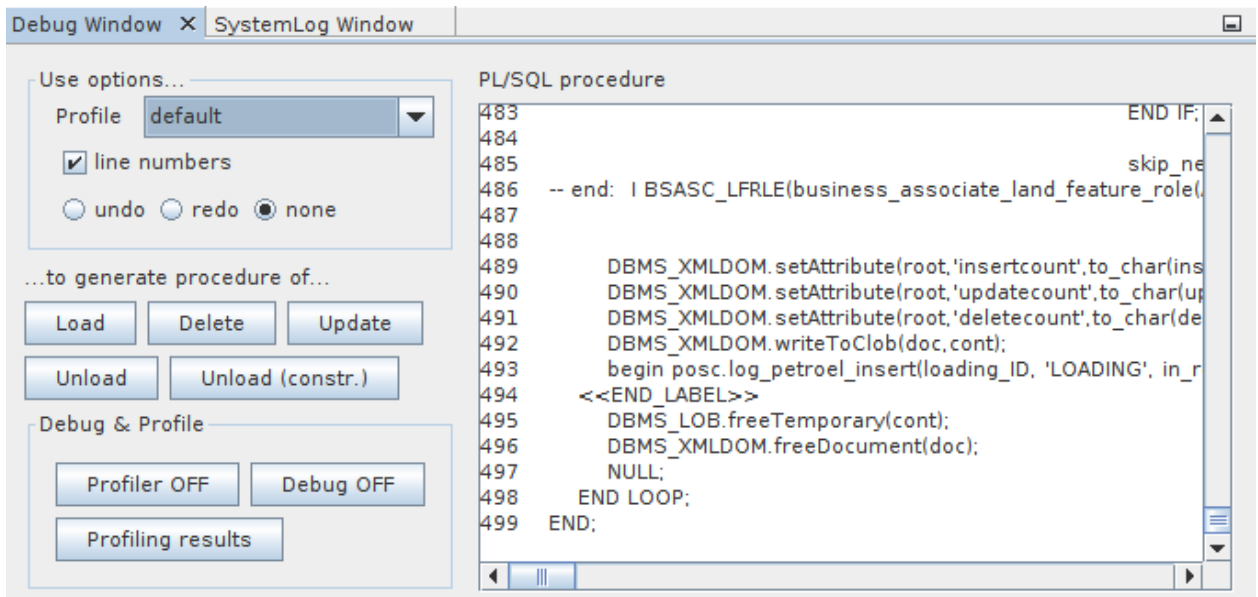
“Input Data” panel

The “**Unloading**” panel contains information that is already loaded into the database.



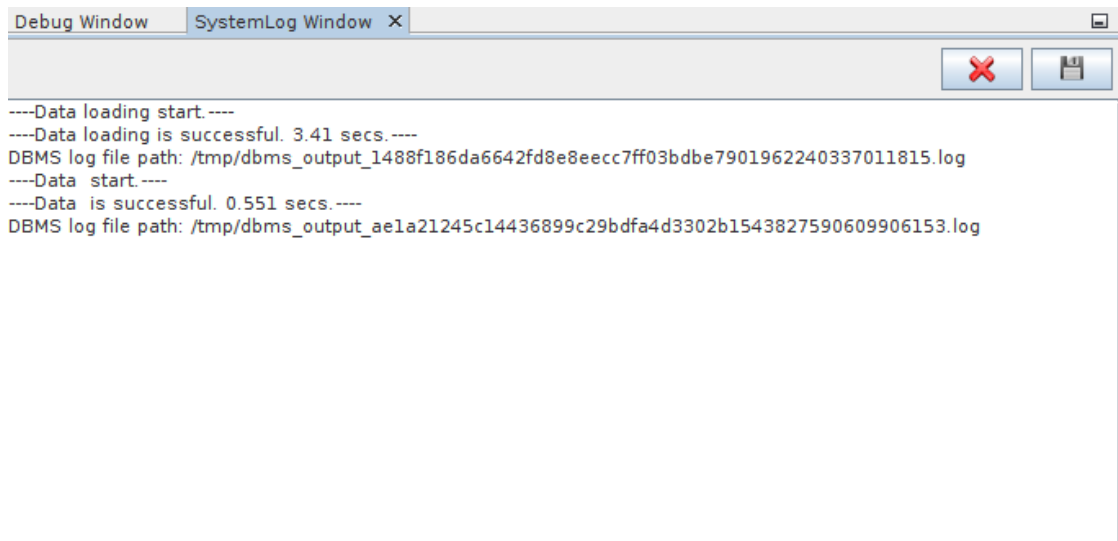
“Unloading” panel

"Debug Panel" is an auxiliary tool that facilitates the development and debugging of system software modules.





“Debug Panel”

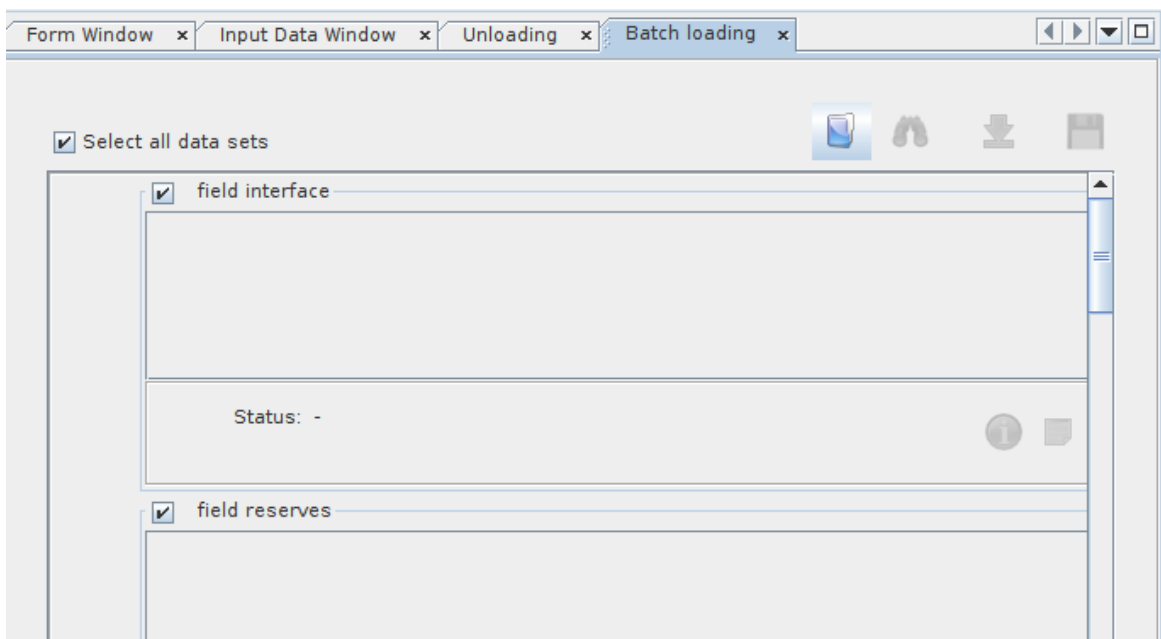
In the "**System Log Panel**" tab you can see system messages. The tool is designed to help the user and the developer and it allows you to visually track the process of taken actions.



"System Log Panel"

-  **Clear System Log**
-  **Save System Log to File**

In the "**Batch Loading**" panel, you can import and load several datasets simultaneously.




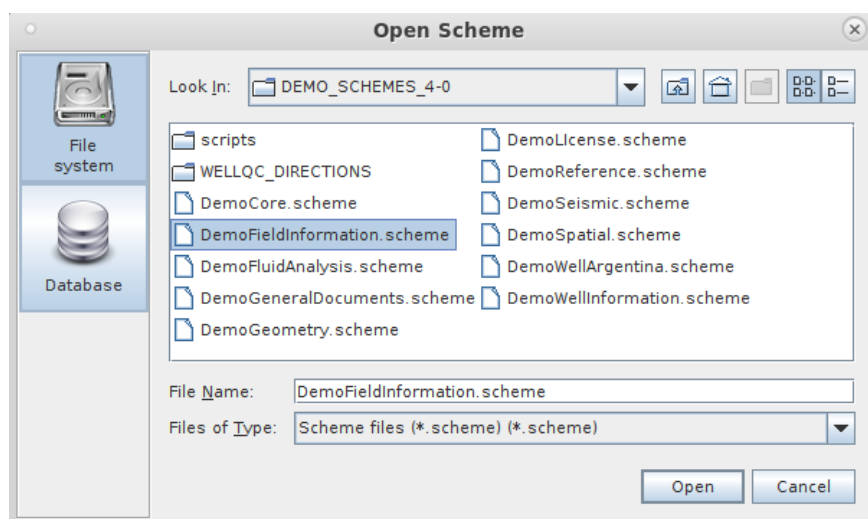
"Batch Loading" panel

APPLICATION MENU

FILE

“File” > “Open Scheme”

All work in the application occurs through predefined templates, which are contained in special files - “schemes”. Before starting work, you should choose a scheme containing the template necessary for work by using the  “Open Scheme” button, or by choosing the menu item *“File” > “Open Scheme”*.




“Open Scheme”

“File” > “Recent Files”

For quick access to recently opened scheme files, you can address to the user history which contains a list of all the schemes that the user opened. From the history panel you can quickly open a newly created dataset.

TOOLS

“Tools” > “Change Database Connection”

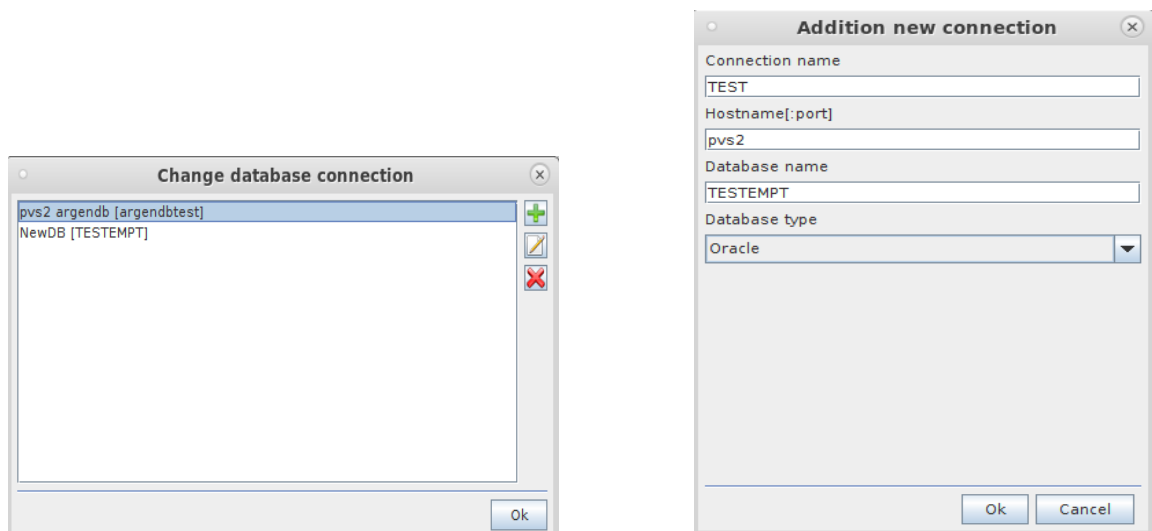
Allows you to create a new database connection or select another connection. In the dialog box you can see the database with which the connection is currently established. On pushing this button:  - **Change Database Connection** – there will appear a list of all existing connections. You can edit an existing or create a new connection. For this purpose there are several commands with which you can perform the above mentioned actions:

-  **Add Connection;**
-  **Edit Connection;**
-  **Remove Connection.**

On adding a new connection a window will appear in which you should fill in the fields:

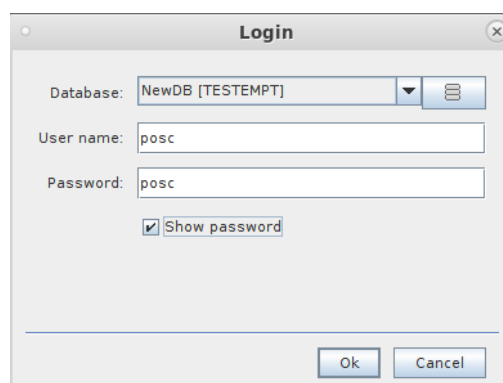
- *Connection Name* – a unique name of the connection which is used to access the connection properties;
- *Host Name* – the name of the machine/computer on which the application is running;
- *Database Name* – the name of the database with which the application will work;
- *Database Type* – a variable that defines the DBMS used, on which the application should run.

Thus, the user can reconnect or configure a connection to the database on their own.



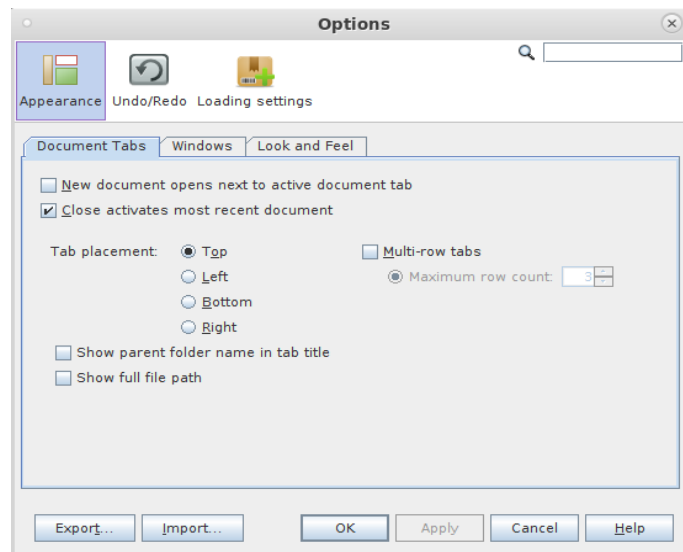
Finally, enter the username and password for the correct connection and click OK. The same function has been moved to the application panel for the user's convenience:

Change Database Connection.



“Tools” > “Options”

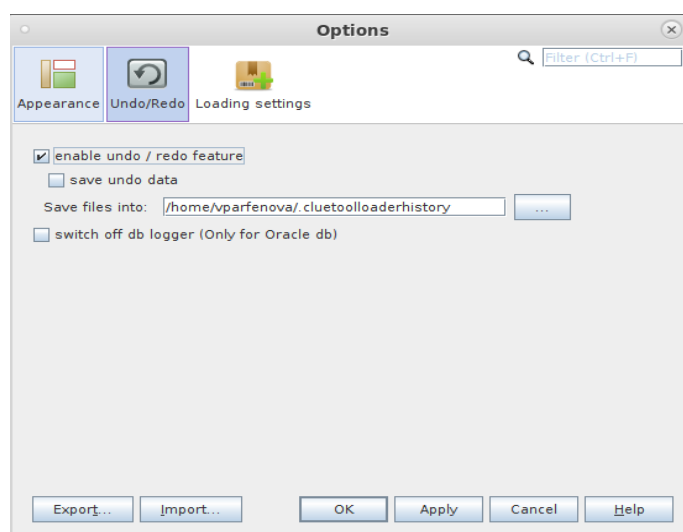
In the ***“Appearance”*** dialog window you can customize the appearance of the application to your needs. It is permissible to change its structure and appearance, for example, to configure the placement of tabs, display of floating windows, change the style, etc. the changes made will take force after you restart the application.



Options - Appearance

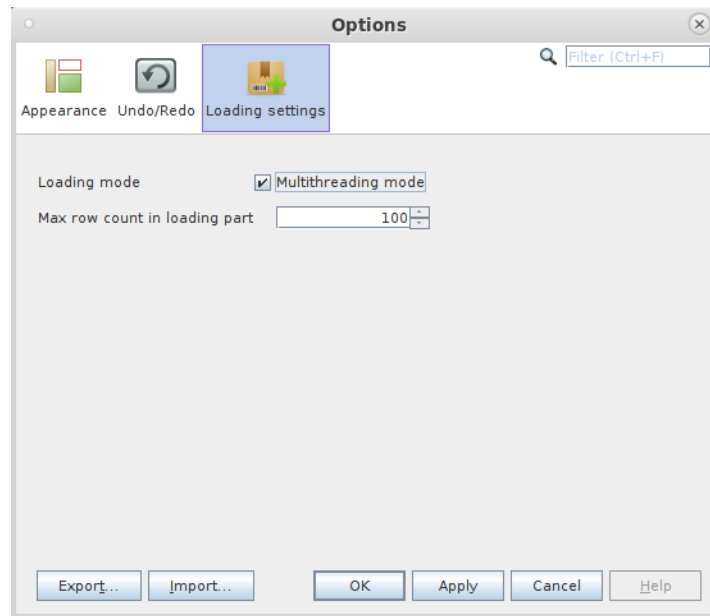
The function ***“Undo/Redo”*** allows you to cancel the last operation performed on the data, or repeat it again.

The ***“Undo/Redo”*** dialog contains settings for disabling the undo and redo functions, as well as disabling automatic saving of undo/redo data to a file.



Options – Undo/Redo

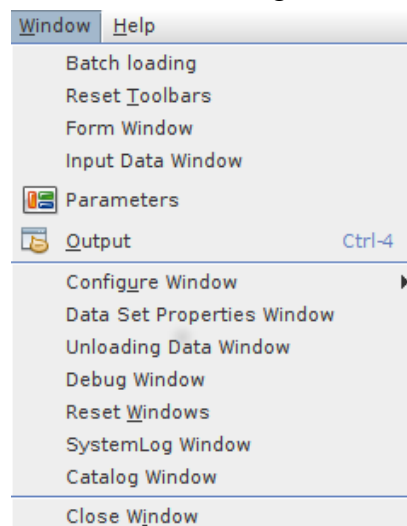
The “**Loading Settings**” dialog enables you to set the size of a loading block (the number of lines that will be processed in one transaction). This option is used in the case when equipment configurations allow loading data not in one transaction, but in several parallel ones.



“Loading Settings”

WINDOW

All windows in the application can be accessed through the “**Window**” menu.



“Window” menu

Reset Windows – restore the interface to the original version;

Configure Window:

- *Maximize* – maximize a window;

-
- *Float* – open a window in a separate tab;
 - *Float Group* – open a group of windows in a separate tab;
 - *Minimize* – minimize a window;
 - *Minimize Group* – minimize a group of windows;
 - *Dock* – dock a window to the panel;
 - *Dock Group* – dock a group of windows to the panel;
 - *Clone Document*;
 - *New Document Tab Group*;
 - *Collapse Document Tab Group*;

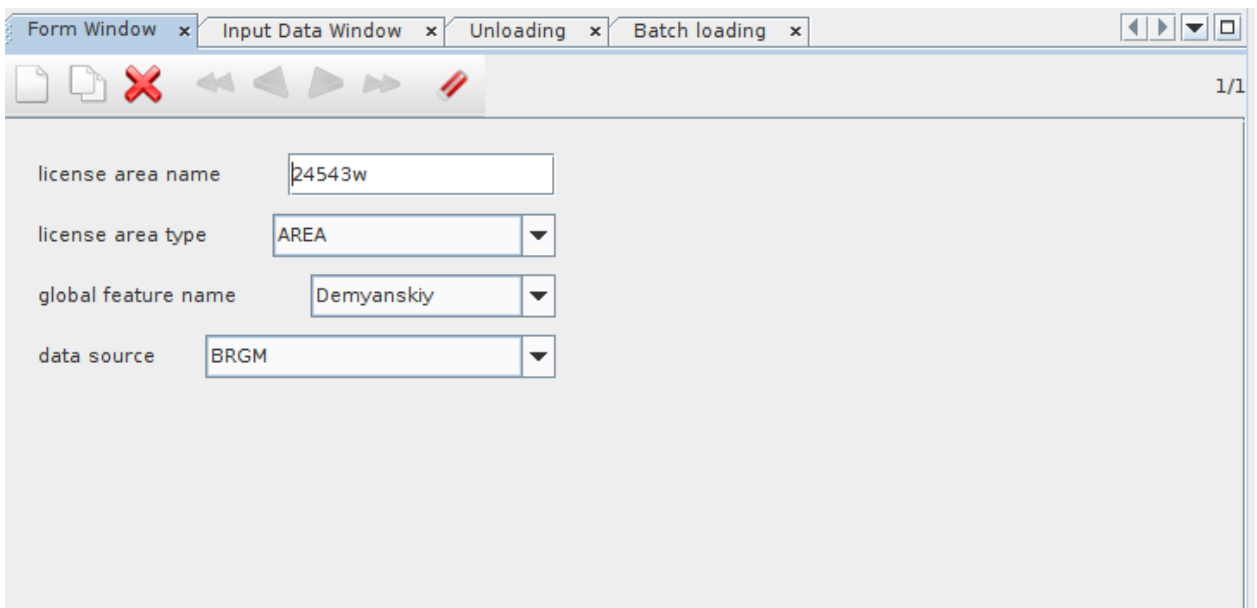
HELP

If you select this option, an information window will open in which technical information about the application is indicated.

DATA PANELS






«*FORM*» PANEL




Form panel is used to enter field values. Here you can prepare the input data row for further loading. The panel content is associated with the selected row in the "*Input Data*" table. Thus, the panel helps you to quickly create a new row and at the same time provides a convenient access to necessary rows while editing existing data in the table.



General view of the “Form” panel

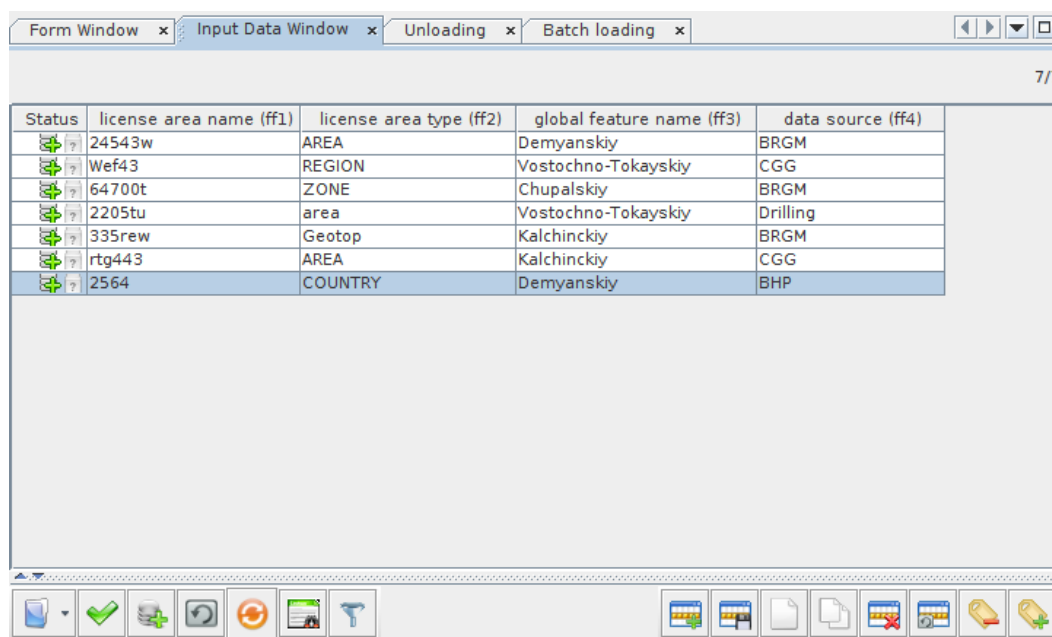
At the top of the panel there is a toolbar with some buttons. The description of the buttons is given below.

-  **New Record** – Creates a new record and adds it to the “*Input Data*” table. The form is filled with default values;
-  **Duplicate Record** - Creates a new record and adds it to the “*Input Data*” table. The form is filled with values from a source record;
-  **Remove Record** – Removes a record which is being currently edited in the panel;
-  **First Record** - Shifts focus to the first record of the “*Input Data*” table;
-  **Previous Record** - Shifts focus to the previous record of the “*Input Data*” table;

-  **Next Record** - Shifts focus to the next record of the ***“Input Data”*** table;
-  **Last Record** - Shifts focus to the last record of the ***“Input Data”*** table;
-  **Erase Data** – Automatically erases (removes) all input data being currently edited in the panel.

“INPUT DATA” PANEL

The ***“Input Data”*** panel contains a tabular section with data prepared for loading into the database and at the same time serves to visualize the data.

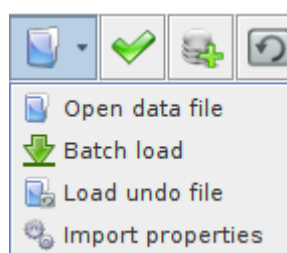




Status	license area name (ff1)	license area type (ff2)	global feature name (ff3)	data source (ff4)
	24543w	AREA	Demyanskiy	BRGM
	Wef43	REGION	Vostochno-Tokayskiy	CGG
	64700t	ZONE	Chupalskiy	BRGM
	2205tu	area	Vostochno-Tokayskiy	Drilling
	335rew	Geotop	Kalchinckiy	BRGM
	rtg443	AREA	Kalchinckiy	CGG
	2564	COUNTRY	Demyanskiy	BHP


General view of the “Input Data” panel

In the lower part of the panel there is a toolbar containing the commands that allow you to perform the following actions: open a dataset, conduct its QC, create new elements, filter or remove rows, create a data file, load data etc.

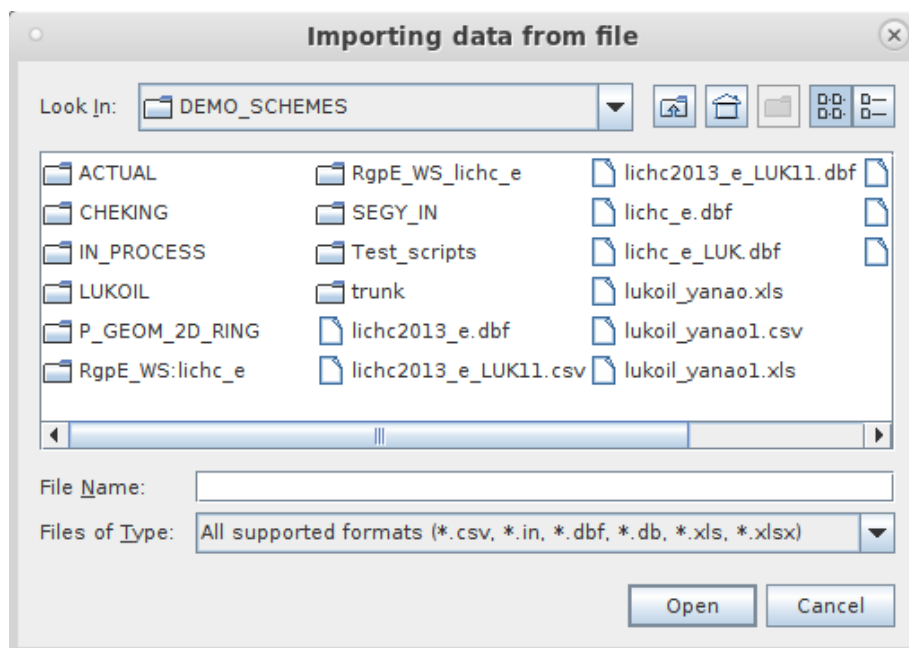
The commands in the toolbar are described below:



-  **Import Data from File** – Import data from a file on the disc. The formats supported are CSV, IN, DBF, DB, XLS, XLSX;
-  **Batch Load** – Import data from a specific directory according to predefined rules. The function will be active only if the selected dataset supports batch loading of material;

- 
Load Undo File – Saving files necessary to undo loader actions. After every operation the program automatically saves an undo file which can be opened later in order to reverse changes made by the loader.

Files have the extension *.in* and when you open such a file, the dialog window shows only those files that are suitable for the current dataset. Files created for other sets are not visible.



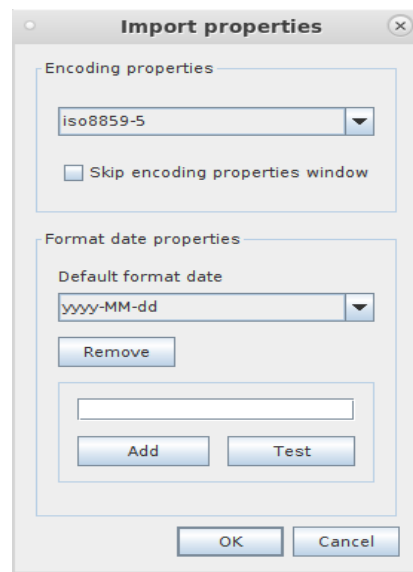
“Load Undo File”

Import Properties -


To convert numerical, textual, graphic, sound information to digital, it is necessary to use encoding. Data encoding is the process of forming a certain presentation of information.


You can use the standard default settings, and at the same time, the user can independently change data encoding settings and date format. We recommend that you set the date format, encoding, and tick the box *“Do not show encoding selection window”*, which will allow you not to waste time on determining such things in the future.

On closing the window, the settings made by the user are saved and become the default settings for the current user.




“Import Properties”



 **Check Data Quality** - Checking the quality of the data in the table. Checked data is marked with special icons in the “*Status*” column.

 **Load Data**. Load/update data from the “*Input Data*” table to the database. The operation (load/remove) is determined based on the status of the row.

Recovery

Throughout an entire work session in the application, the user has an opportunity to return the Database to the state that was before operations of loading, updating and deleting performed with data.



After successful loading, the operations performed by the loader can be canceled: this is indicated by the  icon that appears in the “*Status*” column. For that purpose, there are two buttons on the toolbar:

-  **Undo** - This option will apply to all data in the table.
-  **Undo for Selected Rows** - This option will apply only to selected rows in the table. The data in the database will return to their previous state.

You need to select a row and click the “Undo for Selected Rows” button on the toolbar below the table.

Status	survey (ff1)	spatial obj...	survey typ...
	MG_END_2...	AIGUNSKOE	gravity

A row after “Undo”

Please note that the “Undo” icon has not disappeared. This means that you can load the row again. Please also note that the status icon has changed from  “*Loaded Successfully*” to  “*Removed Successfully*”.



Transform Data - Allows you to view the list of available transformations for datasets, as well as apply them.



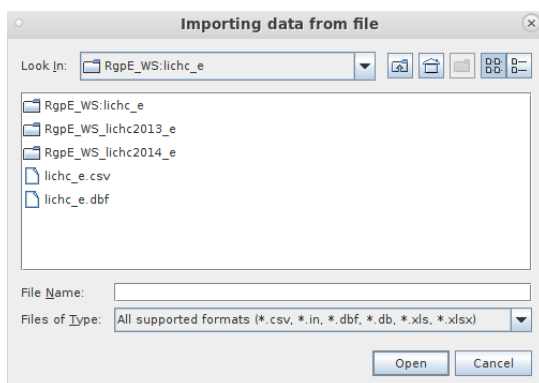
Find Duplicates - Starts searching for duplicates in a table. Found duplicates are deleted. Before this, the program offers to save them to a file.



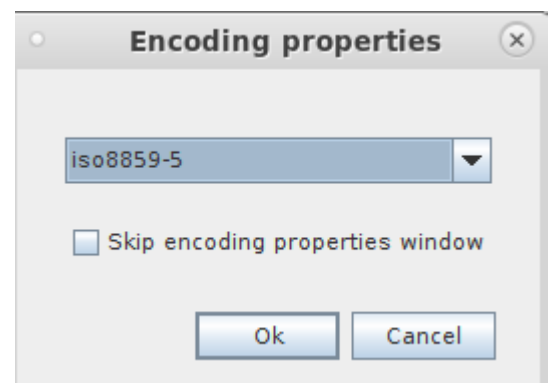
Load Selected Data - Loads into the database only those rows that are selected by the user.



Save Selected Data - Rows selected by the user are saved to a file. Supported formats are CSV, IN, DBF, DB. Next, select encoding for the file, which will determine the working encoding for input files, and click "OK".



“Save Selected”



Selecting encoding for the file



Add Row – An empty row will be added to the table.



Duplicate Row – A copy of a selected row will be added to the table.



Remove Selected Rows – Removes selected rows from the table.

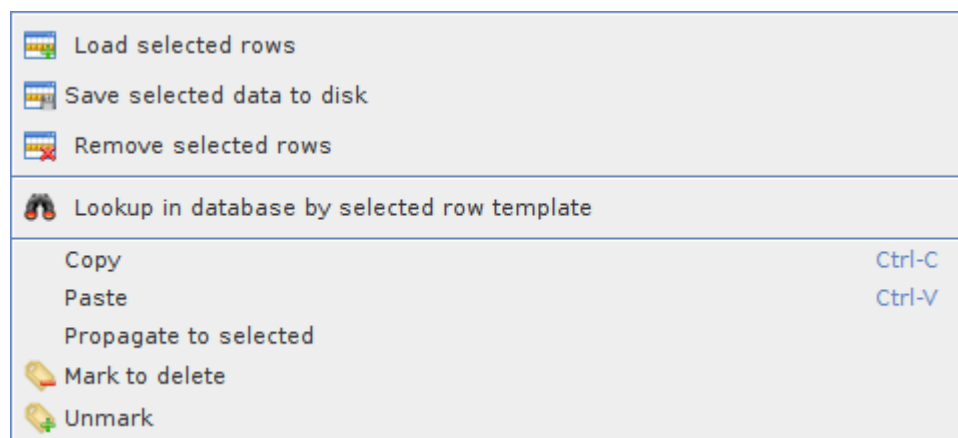


Mark as “Delete” – Marks selected rows with a special marker. These rows will be deleted the next time the loader processes the input.




Mark as “New Row” - Marks selected rows with a special marker of a new row with a status *«Ready for Loading»*. These rows will be loaded the next time the loader processes the input.

You can also use the pop-up tools menu by right-clicking on the table.

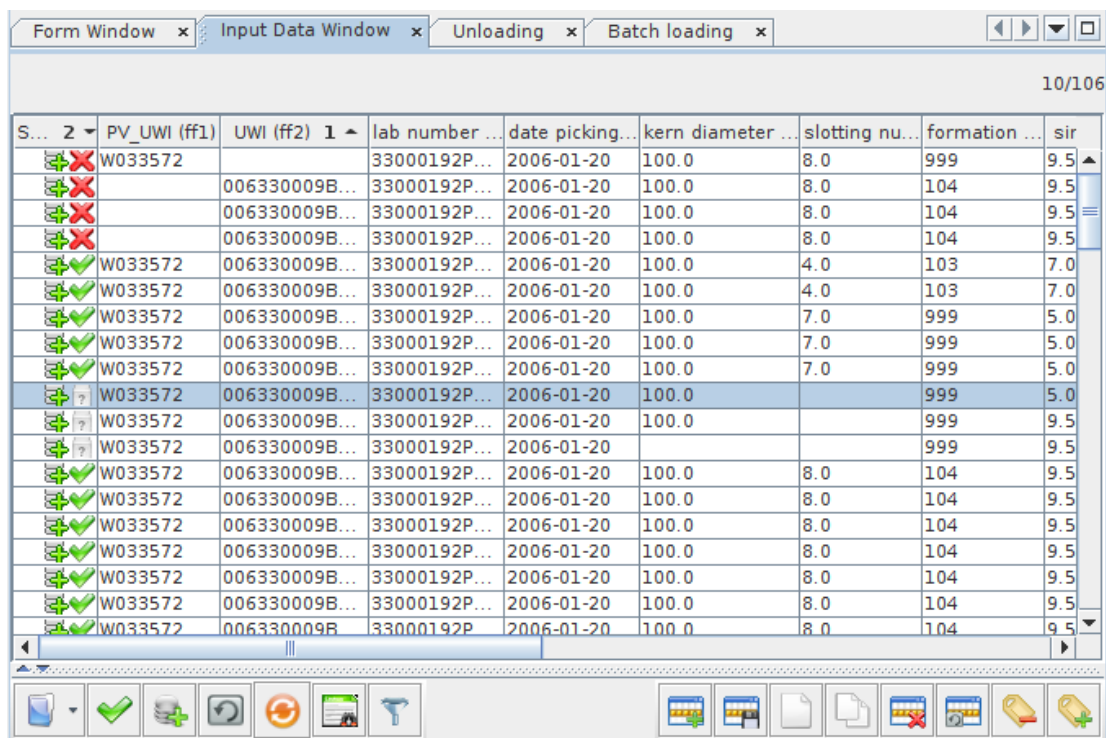


Tools menu

Quality control icons

Row QC icons are displayed in the Status column after applying the command  – **Check Data Quality**. Each row is assigned a status that allows you to determine whether the contents of the row correspond to the format of the fields. Only valid rows are allowed for loading into the database.

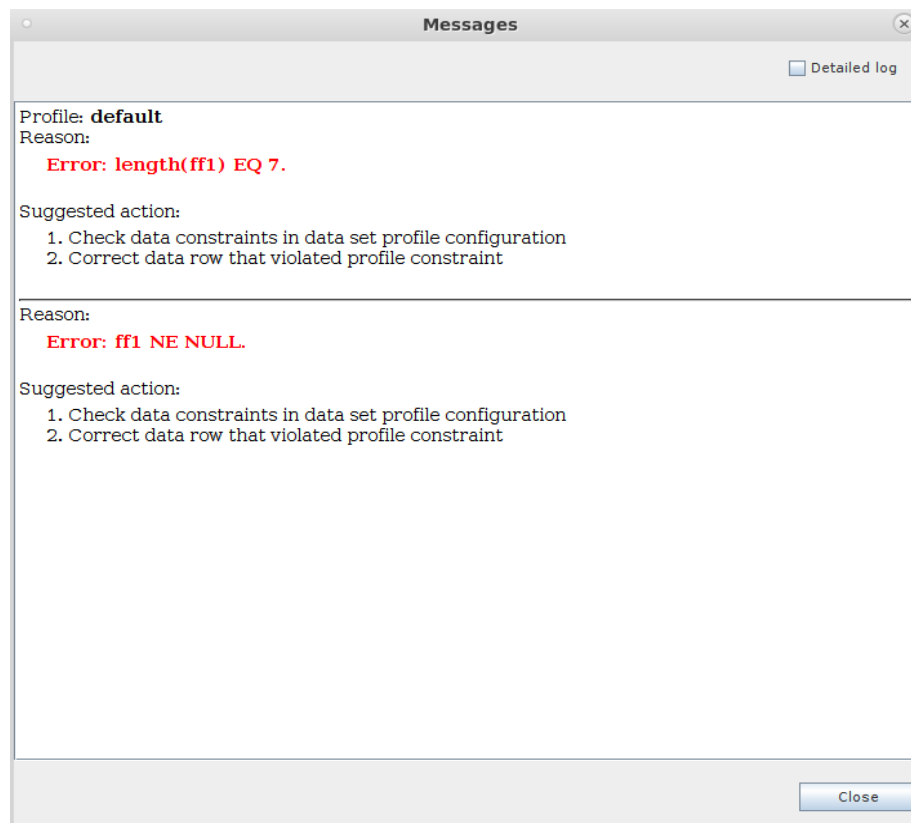
Row status is determined by the second icon - the quality control mark.



S...	PV_UWI (ff1)	UWI (ff2) 1	lab number...	date picking...	kern diameter...	slotting nu...	formation...	sir
	W033572		33000192P...	2006-01-20	100.0	8.0	999	9.5
		006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
		006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
		006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
	W033572	006330009B...	33000192P...	2006-01-20	100.0	4.0	103	7.0
	W033572	006330009B...	33000192P...	2006-01-20	100.0	4.0	103	7.0
	W033572	006330009B...	33000192P...	2006-01-20	100.0	7.0	999	5.0
	W033572	006330009B...	33000192P...	2006-01-20	100.0	7.0	999	5.0
	W033572	006330009B...	33000192P...	2006-01-20	100.0	7.0	999	5.0
	W033572	006330009B...	33000192P...	2006-01-20	100.0		999	5.0
	W033572	006330009B...	33000192P...	2006-01-20	100.0		999	9.5
	W033572	006330009B...	33000192P...	2006-01-20			999	9.5
	W033572	006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
	W033572	006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
	W033572	006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
	W033572	006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
	W033572	006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
	W033572	006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
	W033572	006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5

An example of QC icons




Detailed information about the cause of the error in the lines that did not pass a quality control check can be obtained in the error window by double-clicking the status icon.



Error window

To fix the error, select this line and go to the "**Form**" panel, and there fix the incorrect values so that they correspond to the format of the field

The meaning of the *QC icons* is given below:

-  **Valid Row** - The row is checked and meets the quality criteria;
-  **Invalid Row** - The row is checked, but does not meet the quality criteria. Change invalid data and retry loading;
-  **Row Not Checked** - The row has not been checked.








Row status in the "Input Data" table




Each row in the "Input Data" table has a status. The first status icon in "Status" determines the status of a row in the table. It appears and changes after some manipulations with a row have been performed.

S...	Z	PV_UWI (ff1)	UWI (ff2)	lab number	date picking	kern diameter	slotting nu	formation	sir
W033572				33000192P...	2006-01-20	100.0	8.0	999	9.5
			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
W033572			006330009B...	33000192P...	2006-01-20	100.0	4.0	103	7.0
W033572			006330009B...	33000192P...	2006-01-20	100.0	4.0	103	7.0
W033572			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
W033572			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
W033572			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
W033572			006330009B...	33000192P...	2008-01-20	100.0	8.0	106	9.5
W033572			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
W033572			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
W033572			006330009B...	33000192P...	2006-01-20	100.0	8.0	104	9.5
W033572			006330009B...	33000192P...	2006-01-20	100.0	14.0	203	7.3
W033572			006330009B...	33000192P...	2006-01-20	100.0	14.0	203	7.3
W033572			006330009B...	33000192P...	2006-01-20	100.0	14.0	203	7.3
W033572			006330009B...	33000192P...	2006-01-20	100.0	14.0	203	7.3
W033572			006330009B...	33000192P...	2006-01-20	100.0	14.0	203	7.3
W033572			006330009B...	33000192P...	2006-01-20	100.0	14.0	203	7.3

General view of status icons

Possible statuses when loading data:

-  **Import Error** - There occurred an error while importing a row. The row is skipped at loading. Rows cannot be loaded until the cause of the calculation failure has been resolved;
-  **Ready for Loading** - The row will be loaded when loading starts;
-  **Row Loading Failed** - An attempt to load a row failed, resolve the cause of the failure;
-  **Row Loaded** - The row has been loaded successfully;
-  **Row Needs Updating** - The row was changed after loading successfully and needs to be updated;
-  **Row Marked "Delete"** - When the loader starts, it will remove the selected rows;
-  **Row Removal Successful** - The row has been removed successfully from the database;

-  **Row Removal Failed** - A failure has occurred; the row has not been deleted from the database;
-  **Data Updated** - Means that there have been changes in some values when updating data;
-  **Duplicate Rows** - When loading, the status means that such a line is already stored in the database. When updating rows, it means that no changes in the values have occurred.

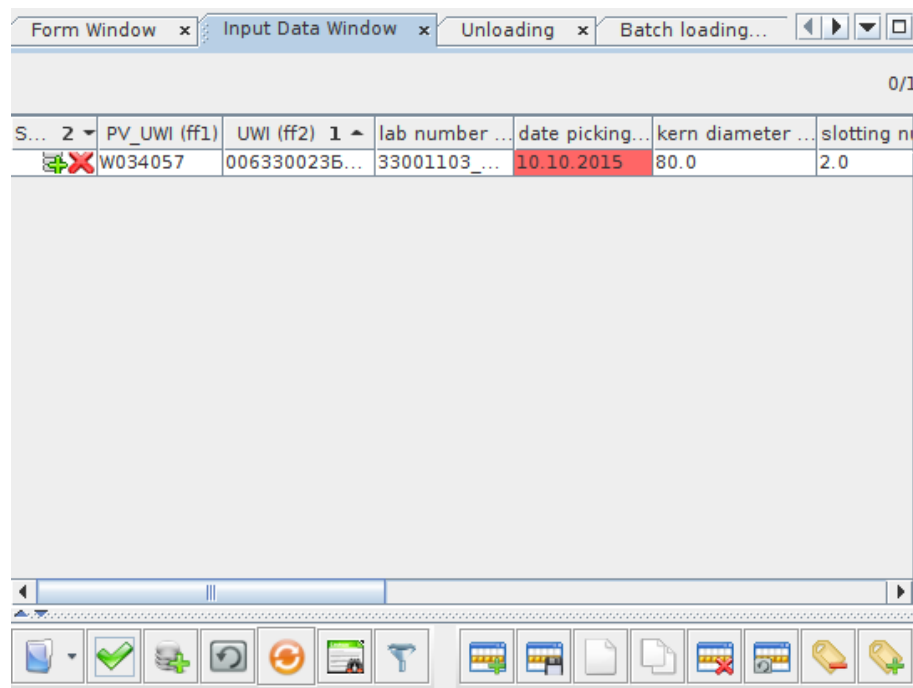
Detailed information about the errors of rows with the statuses ***“Import Error”***, ***“Row Loading Failed”***, ***“Update Failed”*** and ***“Row Removal Failed”*** can be obtained in the error window that appears when you double-click the status icon.

Fields with invalid format

Please note that fields can contain information of various types:

- text;
- floating point number;
- integer value;
- date etc.

If the entered value does not match the format of the field, then in the “***Input data***” table such cells will be highlighted in red. This means that a fill check has been performed for them. If you leave some column of the tabular section blank, which should not remain empty at loading, and try to load the row, you will also receive an error message.



Invalid format field example

To fix the error, select this line and go to the “***Form***” window and fix the incorrect values so that they correspond to the format of the field.

All errors that occurred during importing, verification and loading of data can be exported from the “Input Data” to a DOCX, ODT or PDF file. Access to the report wizard is done through the main menu: Tools > Generate Report.

Importing input data

In order to load information to the database, you first need to fill out the table in the "***Input Data***" panel. There are several ways to do this:

1. Filling in the table using the "***Form***" panel;
2. If data has been prepared in an external program, rows can be imported from a file with saved results, supported formats are: CSV, IN, XLS, XLSX, DBF and DB;
3. Some datasets support the import of prepared material from a specified directory (batch download).
- 4.

Depending on the dataset, the imported material can be transformed, for example, empty fields are filled with default values, the values of one field are calculated depending on the conditions imposed on other fields, etc. The process of material transformation is called *pre-processing of the input data*.

When importing data, regardless of the data source, several steps take place:

1. Format selection: here you can select the desired settings profile or create your own profile;
2. In the "*General*" window, you can configure the delimiter character between fractional values and set the date format. You can also select "*Detailed log*" for further detailed explanation of an error, if it occurs;
3. Mapping input data columns to the dataset fields. The fields that are calculated in the "*Pre-Processing*" will remain empty if you check the box next to the field. If the number of fields in the form matches the number of fields in the input file, you can use the *Auto* button (automatic mapping), or select the field values manually.

In the rule set, fields are calculated, values from which will be substituted when an input file is opened, based on the values of any other fields. Possible calculations in the "*Pre-processing*" are selected by a tick.

All fields that were omitted during "*mapping*" and are not calculated in the "*Pre-Processing*" will remain empty in the final table in the "***Input Data***" panel. At subsequent openings of files of the same name for one form, "*mappings*" are saved. "*Reset*" the current settings is used to delete all the settings of the "*mapping*" dialog stored in the memory for the form with which the user is currently working.

“Pre-processing of the Input Data” window

Before adding a row of input data to the “***Input Data***” panel, the loader takes turns taking auto-substitution objects and checks the row for compliance with the conditions of the current object. If the line passes, then the calculations specified in the auto-substitution object occur. This happens with every object. Next, the values of the fields in the buffer are copied to the current line, and the line is displayed in the “***Input Data***”.

When data appears in the “***Input Data***” table, those rows for which a failure occurred during the calculations are marked with special icons, the rest are marked with the “***Ready for Loading***” icon.

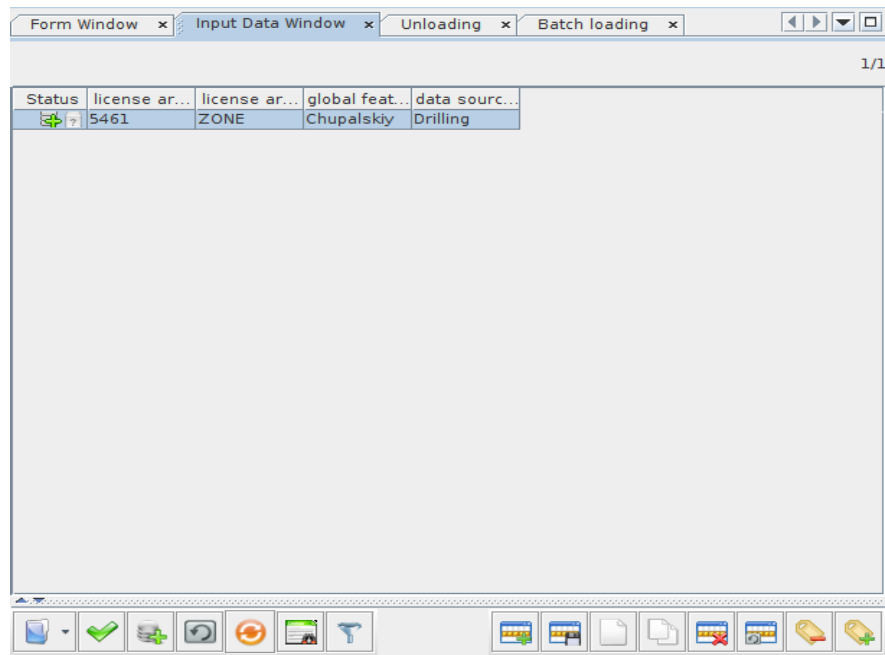
The reason for the failure can be found by double-clicking on the row of interest. The window that appears contains descriptions of all errors associated with this row, including preprocessing errors and quality control errors.

Lines marked with the “***Import Error***” icon cannot be loaded until the cause of the calculation failure has been resolved. When you click the “***Load Data***” button, these lines will be skipped. After the cause of the calculation failure has been eliminated, you can restart it by clicking the “***Transform Data***” button. If the repeated calculations are successful, then the “Status” of the row will change to “***Ready for Loading***” and it will be available for loading. You can also postpone the correction of import errors, and the data that has not passed pre-processing can be saved to a file with a supported format.

Undo loader actions



Throughout an entire work session, the user has an opportunity to return the database to the state that was before the operations of loading, updating or deleting the data.

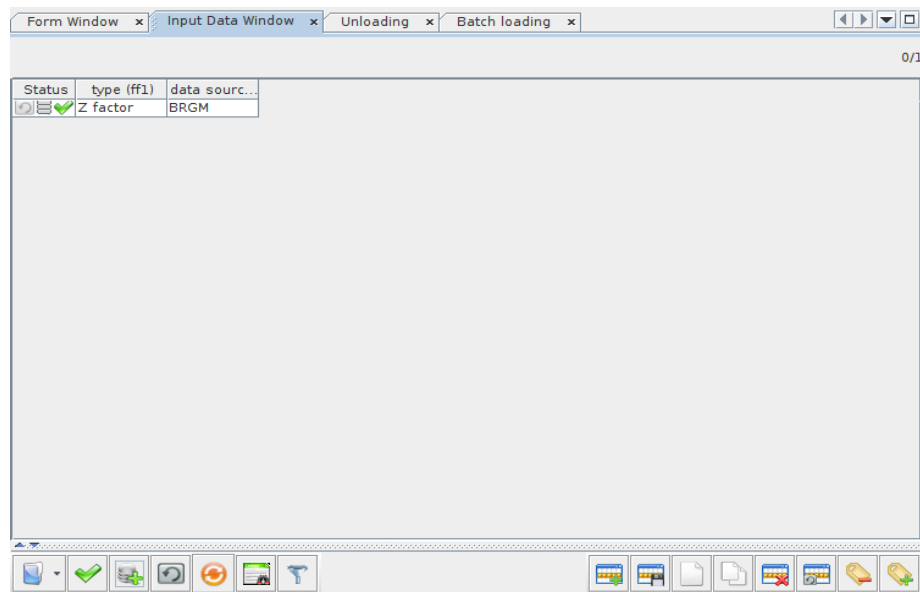
Let us consider the example of loading a new row.



A prepared row ready for loading

After entering data, we use the “**Load Data**” button, wait until the data is transferred to the database and a dialog box with a message about successful loading will be displayed. The Figure shows that, after the successful loading, the operations performed by the loader can be canceled; it is shown by an icon that appears in the “*Status*” column. To perform a download cancellation,

the “**Input Data**” toolbar has two buttons  and .





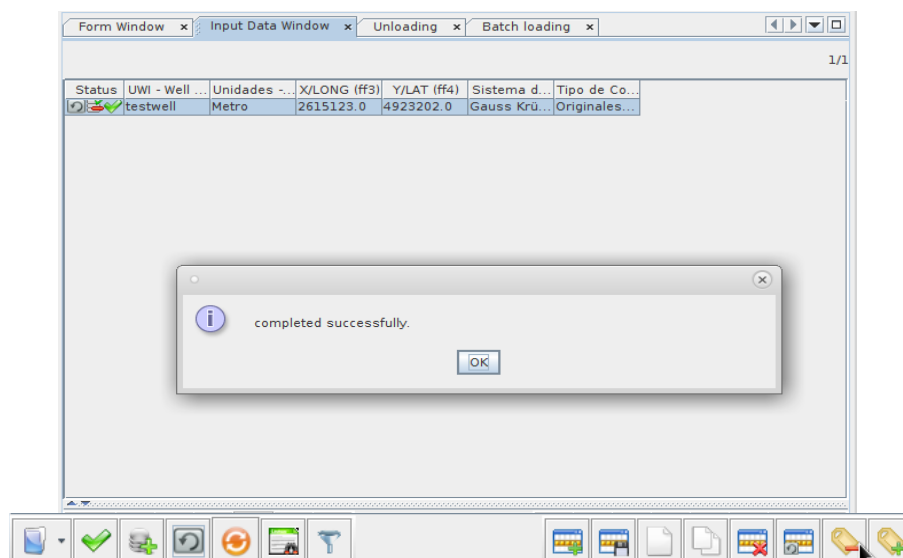
A loaded row

To make sure that the row really disappears from the database after the loader action is canceled, we first extract the row in the "**Unloading**" panel.

After that, return to the "**Input Data**" panel and discard the changes made by the loader. To do this, perform the following steps:

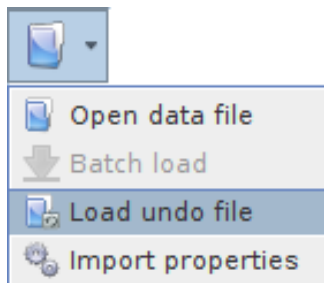
- select a row or several rows that should be unloaded;
- apply the "**Undo for Selected Rows**" button on the toolbar below the table.
-

The result is shown in the figure. The undo icon has been saved. This means that the row can be loaded again. The status icon has changed from  "**Loaded Successfully**" to  "**Removed Successfully**".



Undo row loading

After each operation, the program automatically saves the undo file, which can be opened later in order to reverse the changes made by the loader.



Load Undo File

Files have an extension .in, and when opening such a file the dialog window shows only those files that are suitable for the current data set. Files created for other datasets are not visible.

“UNLOADING” PANEL






The panel which contains a table with the material unloaded from the database.

A screenshot of a software window titled 'Unloading'. It contains a table with 5 columns: Status, type (ff1), data sourc..., Creation d..., and Row creator. The table has 8 rows of data. Below the table is a large empty area. At the bottom of the window is a toolbar with several icons.

Status	type (ff1)	data sourc...	Creation d...	Row creator
✓	Z factor	BRGM	2019-12-0...	POSC
✓	Young mo...	BRGM	2019-12-0...	POSC
✓	K value	CGG	2019-12-0...	POSC
✓	accelerom...	PDO	2019-12-0...	POSC
✓	GR API unit	Manual of ...	2019-12-0...	POSC
✓	coherence	SPWLA Glo...	2019-12-0...	POSC
✓	density liq...	UKOOA 91	2019-12-0...	POSC
✓	compressi...	SPWLA Glo...	2019-12-0...	POSC

General view of the “Unloading” panel

At the bottom there is a toolbar with buttons, the description of which is given below:

-
-  **Unload Data** - After clicking this icon, a “Filter” panel appears, on which you can enter conditions for selecting data;
 -  **Delete Selected Records** - The data selected in the table is removed from the database. Before removing, it is assumed that the data has been unloaded from the database;
 -  **Update Selected Records** - The data selected in the “*Unloading*” table is copied to the “*Input Data*” table. Each row gets the status of "*Loaded*" and can be changed in the "*Form*" panel;
 -  **Delete Selected Records and Files** - Permanently deleting selected rows from the database and after that deleting the files themselves;
 -  **Import Data for Removing** - Import meta-data to further delete physical data.

Unloading information using data filtering

Unloading data is required, first of all, for performing operations of updating and deleting the loaded material. Since the databank involves a huge amount of loaded material, it does not make sense to unload it entirely. Therefore, only the data with which it is necessary to work directly is unloaded. In order to select the required portion of material, a “**Filter**” component is used. This function allows you to configure the conditions that the unloaded data must satisfy. For example, rows from a specific day or period of a day, or related to a specific well, or downloaded by a specific user in the last week. The filter allows you to unload the necessary data. Conditions can be combined with each other by **AND/OR** links.

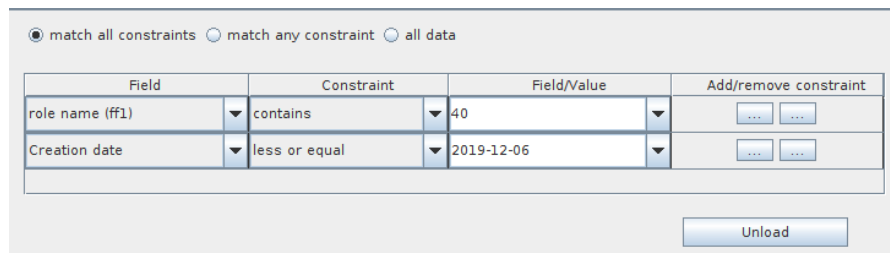
Possible conditions: *equal, not equal, more, less, more or equal, less or equal, like, contains*. Each link has a form “FIELD” condition “FIELD/VALUE”.

For example:

“Code” *contains* “40”

“Creation Date” *more or equal* “2014-04-17”

“Row Creator” *equal* “POSC”

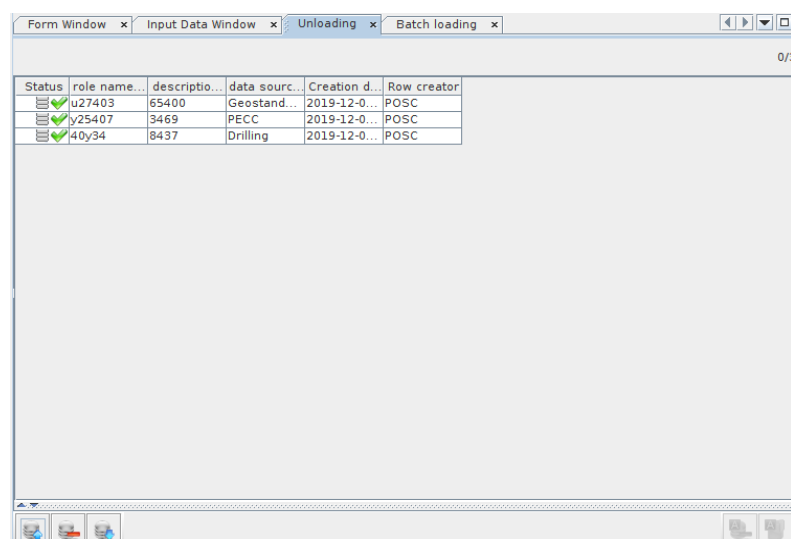


Field	Constraint	Field/Value	Add/remove constraint
role name (ff1)	contains	40	...
Creation date	less or equal	2019-12-06	...

Unload

Filtering data by ff1 fields and creation date

The result of filtering data by ff1 fields and creation date.



Status	role name...	descriptio...	data sourc...	Creation d...	Row creator
✓	u27403	65400	Geostand...	2019-12-0...	POSC
✓	y25407	3469	PECC	2019-12-0...	POSC
✓	40y34	8437	Drilling	2019-12-0...	POSC

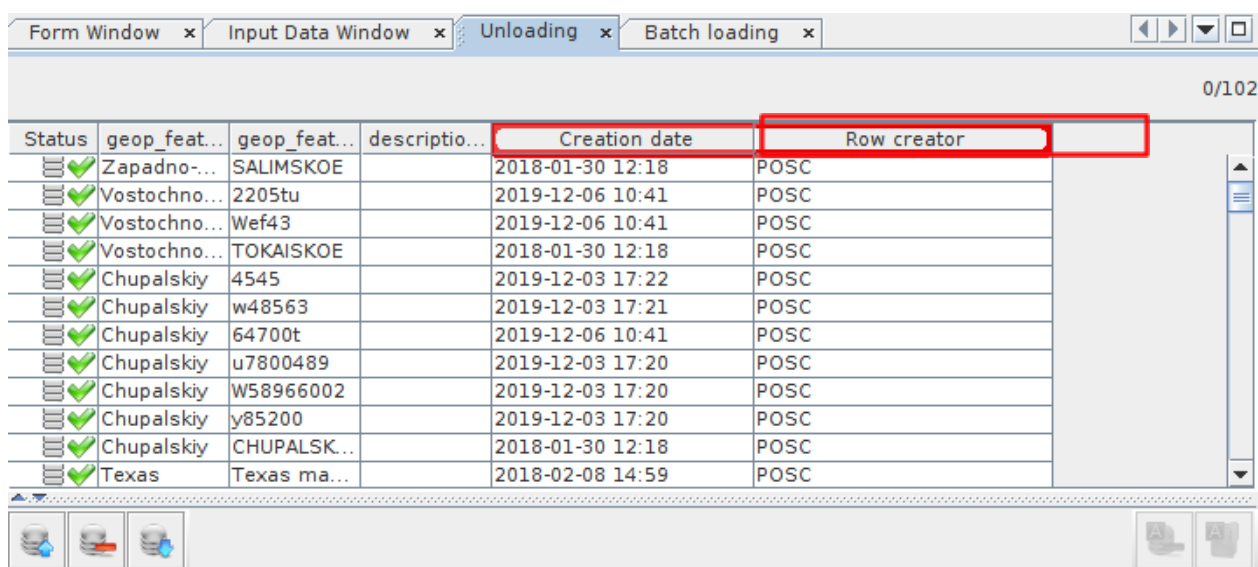
The result of data filtering

Service columns

In the “**Unloading**” table, in addition to the columns with input data, there are two additional columns: “*Creation Date*” and “*Row Creator*”. Both columns can be used as conditions in the “**Filter**” panel.

The load date is equal to the system date of the server/computer, the date contains the time accurate to the second. This allows you to control the sequence of data loading.

The “*Row Creator*” field shows who loaded the data.



Status	geop_feat...	geop_feat...	descriptio...	Creation date	Row creator
✓	Zapadno...	SALIMSKOE		2018-01-30 12:18	POSC
✓	Vostochno...	2205tu		2019-12-06 10:41	POSC
✓	Vostochno...	Wef43		2019-12-06 10:41	POSC
✓	Vostochno...	TOKAISKOE		2018-01-30 12:18	POSC
✓	Chupalskiy	4545		2019-12-03 17:22	POSC
✓	Chupalskiy	w48563		2019-12-03 17:21	POSC
✓	Chupalskiy	64700t		2019-12-06 10:41	POSC
✓	Chupalskiy	u7800489		2019-12-03 17:20	POSC
✓	Chupalskiy	W58966002		2019-12-03 17:20	POSC
✓	Chupalskiy	y85200		2019-12-03 17:20	POSC
✓	Chupalskiy	CHUPALSK...		2018-01-30 12:18	POSC
✓	Texas	Texas ma...		2018-02-08 14:59	POSC

An example with additional columns

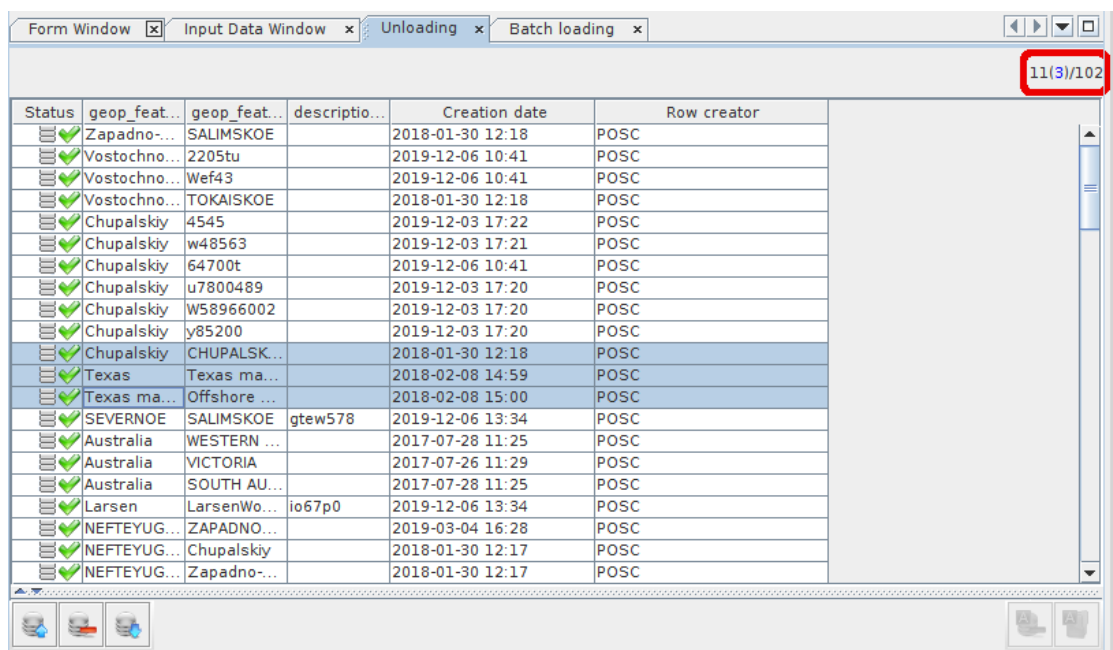
TABLE ROW COUNTER

The tables “*Unloading*” and “*Input Data*” have **counters** located in the upper right corner of the panel. The **counter** shows how many rows are in the table, the number of the first selected row and the total number of selected rows.

For example,

6/13 means that there are 13 rows in the table and that the first selected row is 6;

31(5)/70 means that there are 70 rows in the table, 5 rows are selected and the first selected row number is 31.

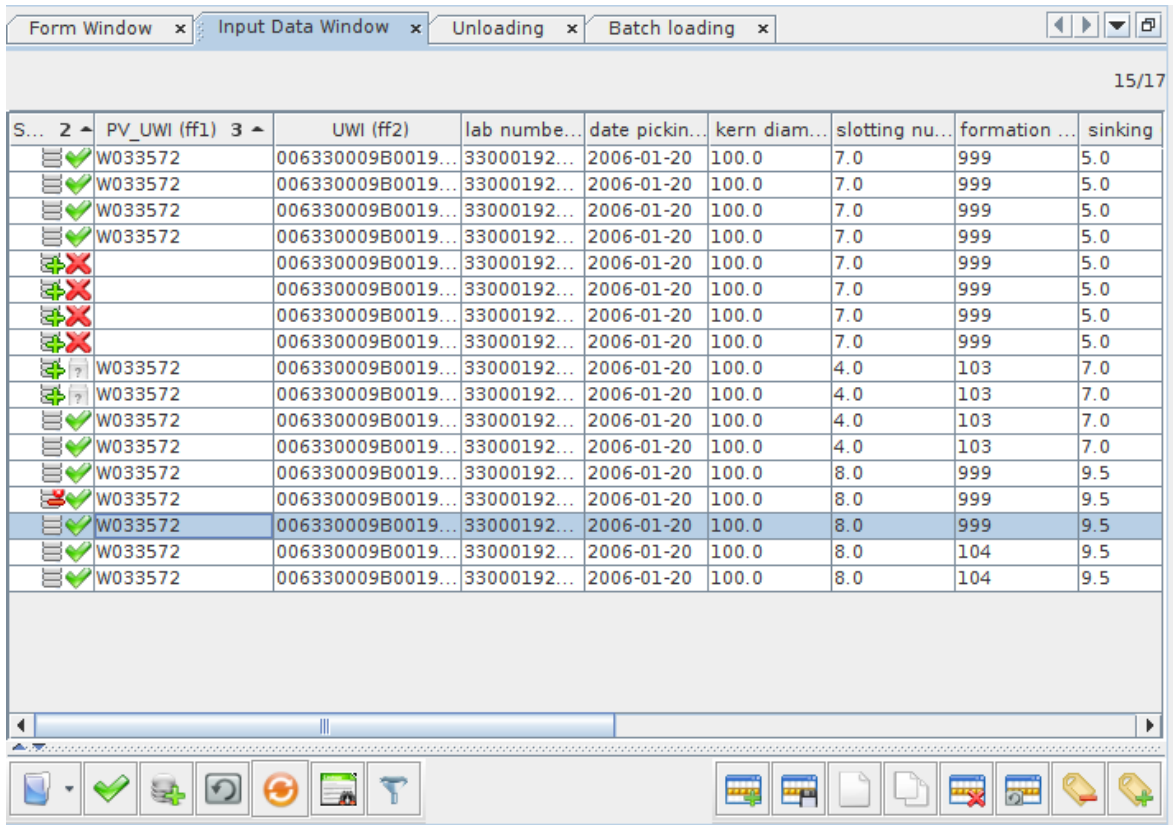


Status	geop_feat...	geop_feat...	descriptio...	Creation date	Row creator
✓	Zapadno-...	SALIMSKOE		2018-01-30 12:18	POSC
✓	Vostochno...	2205tu		2019-12-06 10:41	POSC
✓	Vostochno...	Wef43		2019-12-06 10:41	POSC
✓	Vostochno...	TOKAISKOE		2018-01-30 12:18	POSC
✓	Chupalskiy	4545		2019-12-03 17:22	POSC
✓	Chupalskiy	w48563		2019-12-03 17:21	POSC
✓	Chupalskiy	64700t		2019-12-06 10:41	POSC
✓	Chupalskiy	u7800489		2019-12-03 17:20	POSC
✓	Chupalskiy	W58966002		2019-12-03 17:20	POSC
✓	Chupalskiy	y85200		2019-12-03 17:20	POSC
✓	Chupalskiy	CHUPALSK...		2018-01-30 12:18	POSC
✓	Texas	Texas ma...		2018-02-08 14:59	POSC
✓	Texas ma...	Offshore ...		2018-02-08 15:00	POSC
✓	SEVERNOE	SALIMSKOE	gtew578	2019-12-06 13:34	POSC
✓	Australia	WESTERN ...		2017-07-28 11:25	POSC
✓	Australia	VICTORIA		2017-07-26 11:29	POSC
✓	Australia	SOUTH AU...		2017-07-28 11:25	POSC
✓	Larsen	LarsenWo...	io67p0	2019-12-06 13:34	POSC
✓	NEFTEYUG...	ZAPADNO...		2019-03-04 16:28	POSC
✓	NEFTEYUG...	Chupalskiy		2018-01-30 12:17	POSC
✓	NEFTEYUG...	Zapadno-...		2018-01-30 12:17	POSC

“Unloading” panel

TABLE SORTING

For various tasks, you may need the “Sort Table in Descending/Ascending Order” function, which can be called with one click on the header of any column. For example, in order for the rows with errors to appear together, the “*Input Data*” table should be sorted by the “*Status*” column by left-clicking on the column header. The table will be sorted and the rows with the same statuses will appear next to each other.



S... 2	PV_UWI (ff1) 3	UWI (ff2)	lab numbe...	date pickin...	kern diam...	slotting nu...	formation ...	sinking
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✗		006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✗		006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✗		006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✗		006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✗		006330009B0019...	33000192...	2006-01-20	100.0	7.0	999	5.0
✗	W033572	006330009B0019...	33000192...	2006-01-20	100.0	4.0	103	7.0
✗	W033572	006330009B0019...	33000192...	2006-01-20	100.0	4.0	103	7.0
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	4.0	103	7.0
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	4.0	103	7.0
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	8.0	999	9.5
✗	W033572	006330009B0019...	33000192...	2006-01-20	100.0	8.0	999	9.5
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	8.0	999	9.5
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	8.0	104	9.5
✓	W033572	006330009B0019...	33000192...	2006-01-20	100.0	8.0	104	9.5

An example of a table sorted by the “Status” column

SELECTING ROWS IN A TABLE

The ways of selecting rows in the “*Input Data*” and “*Unloading*” tables are presented below:

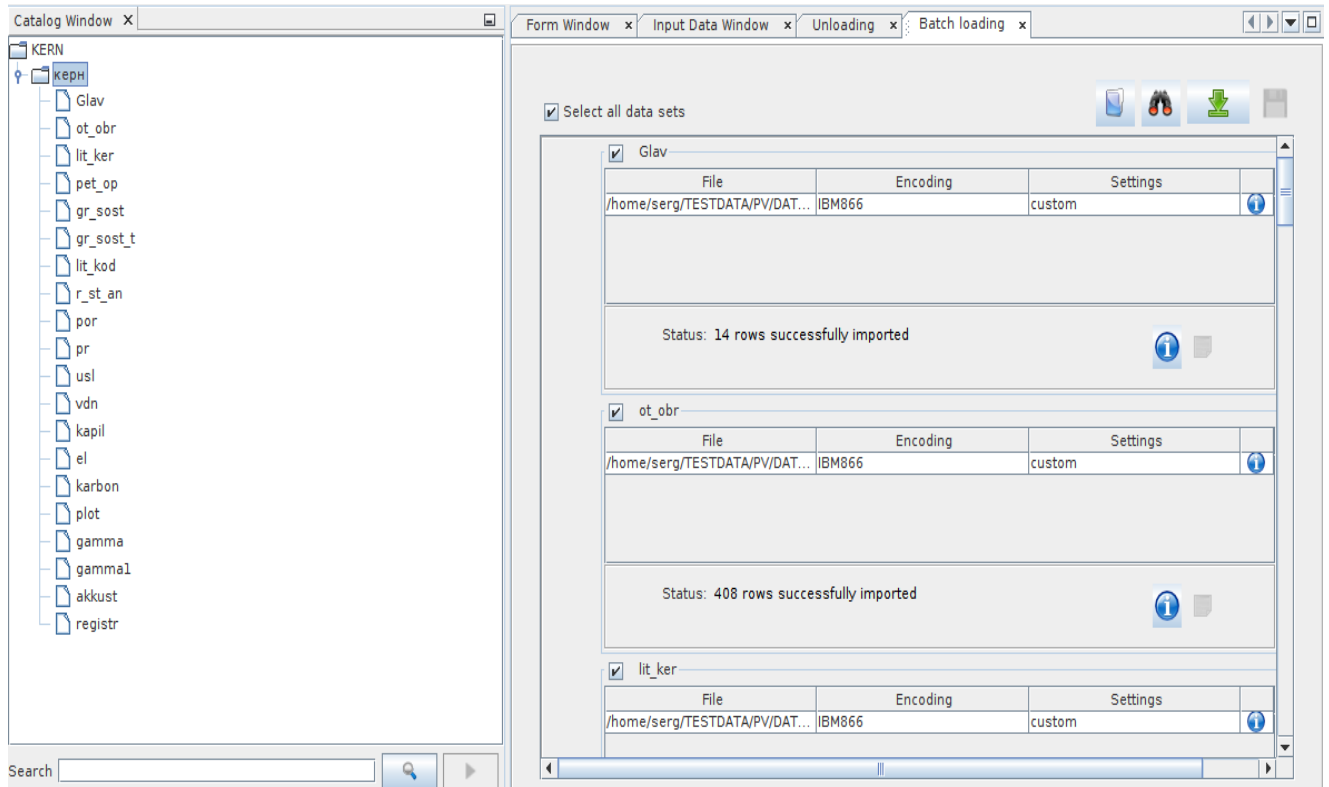
- **Ctrl+A** – select all rows;
- **Click, Shift + click** – select a range; the first and last row of the range is indicated;
- **Ctrl + click, Ctrl + click** – select multiple rows;
- **Click-and-drag** – select a range; the first and last row of the range is indicated;

Table row selecting is necessary for various operations, such as deleting and saving rows. Before you select the desired rows, you first need to sort the table so that the desired rows are next to each other.

“BATCH LOADING” PANEL





It is a panel with a table into which information on all templates is imported and loaded.

Due to the simultaneous processing of several sets, the time spent on processing and loading material into the database is reduced.



“Batch Loading” panel


The ***“Batch Loading”*** panel contains tables that include material information related to the corresponding datasets. The panel also has a number of control components

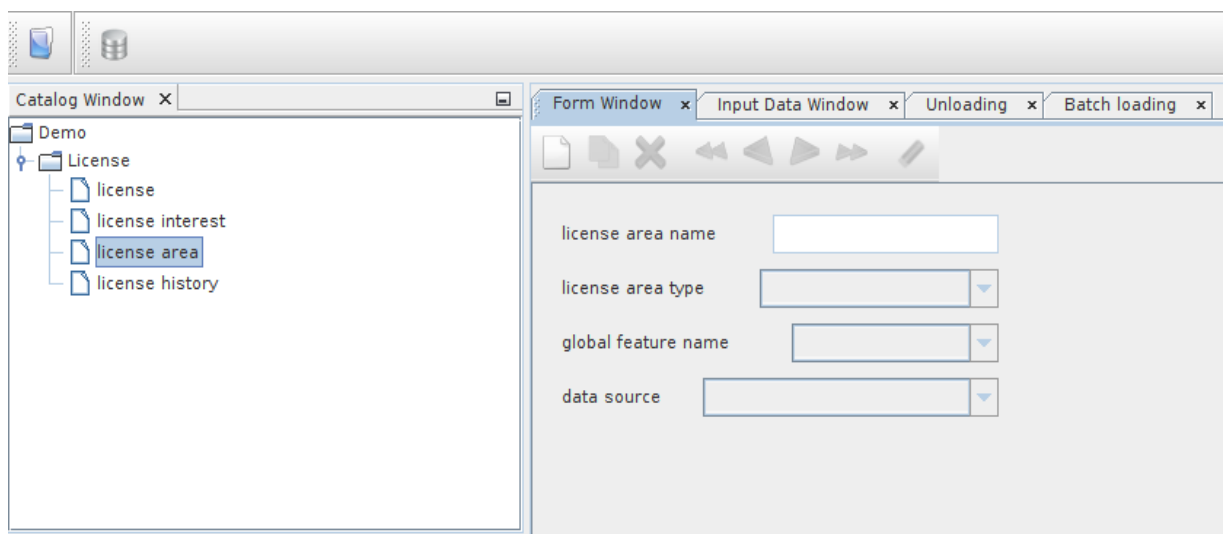
-  **Choose Import Directory** - Import directories for processing material for all data sets.
-  **Find Duplicates** – Find duplicates in a file.
-  **Load Data** – Load all the imported rows into the database simultaneously.
-  **Save Invalid Data** - Save rows that have not passed the process of material validation to a text file

Operation Scenario

LOADING DATA INTO THE DATABASE

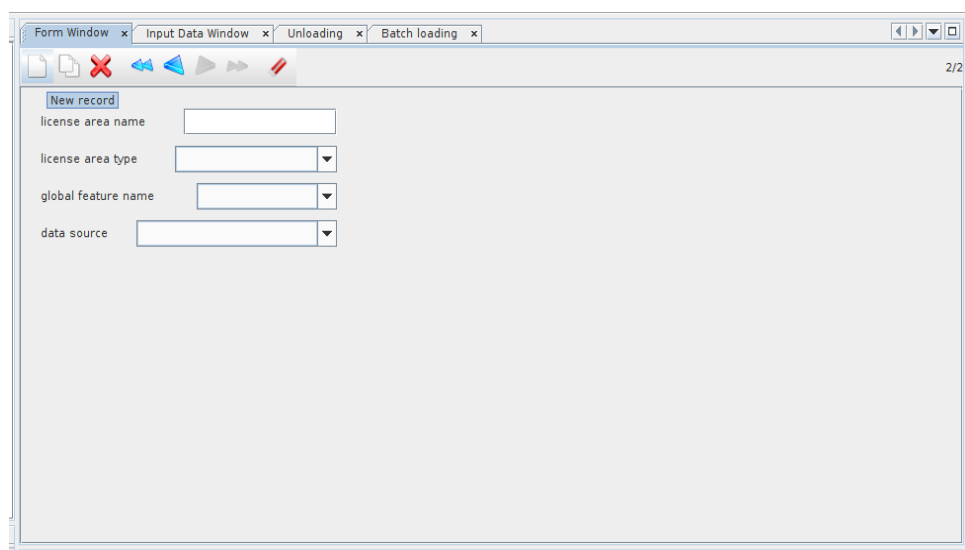
LOADING DATA WITH THE HELP OF THE “FORM” PANEL

In order to open a scheme in the loader you need to select "**File**" on the menu bar, then "**Open Scheme**" and specify the path to it in the scheme selection dialog. The "**Catalog Window**" displays a tree of datasets. You can open the group node by double-clicking or by clicking on the  button.



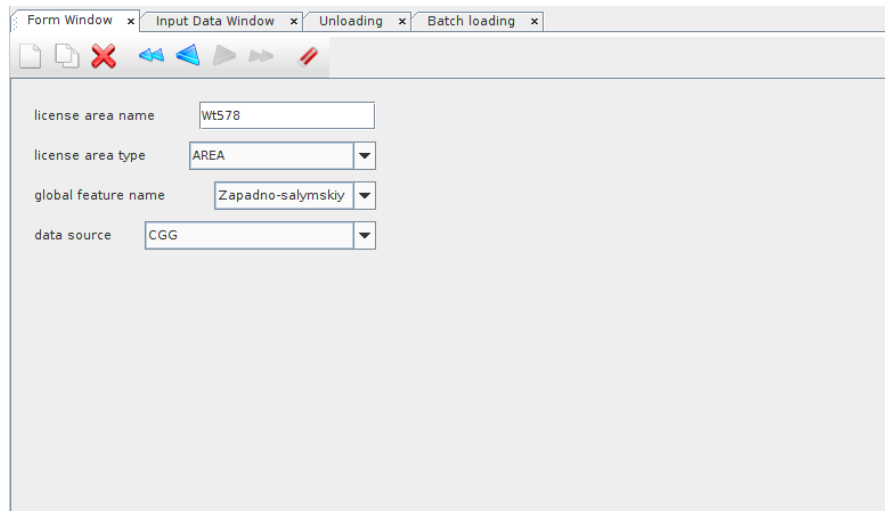
Opening a scheme

Fields in the “**Form**” panel are locked. In order for the fields to become active, use the "**New Record**" function.



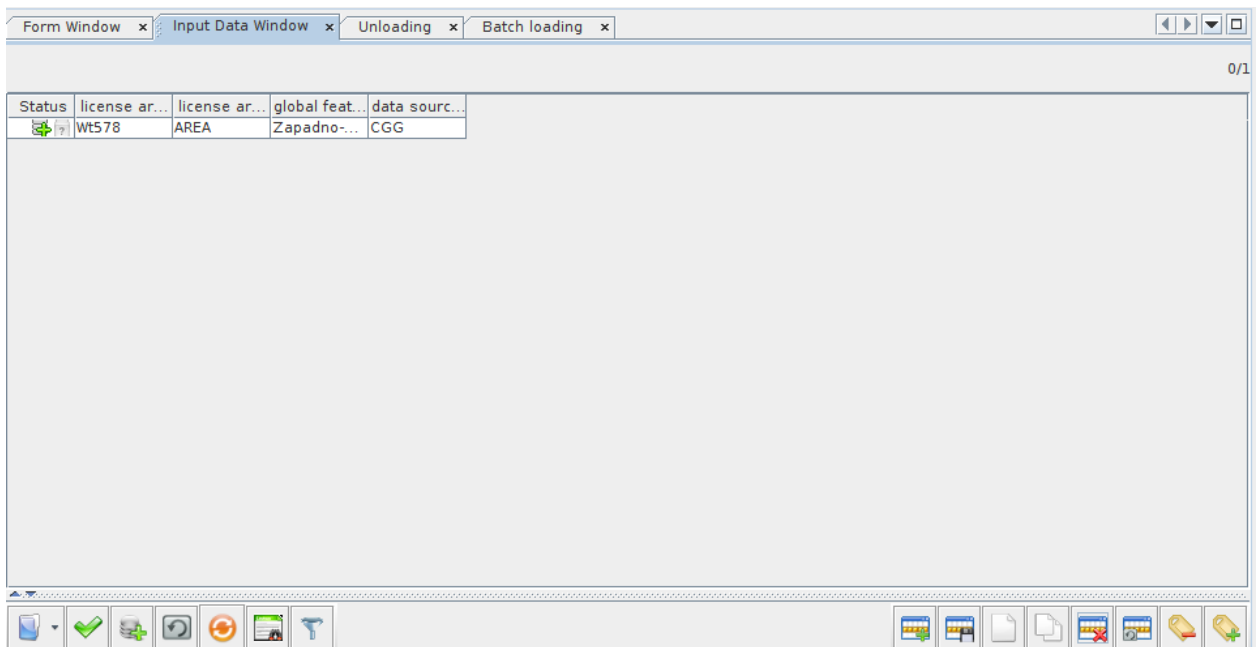
Creating a new record in the “Form” panel


Then you need to fill in the fields manually in the "**Form**" panel.



Input data in the “Form” panel

Records added using the “**Form**” panel are not pre-processed. The row is displayed in the “**Input Data**” table and is marked with a “**Ready for Loading**” icon. After the record has passed the quality control check, it can be loaded into the database. To do this, use the "**Load Data**" function. Upon completion of data loading, a message is displayed with the result of loading.



Status	license ar...	license ar...	global feat...	data sourc...
	WT578	AREA	Zapadno-...	CGG

A row ready for loading

In order to unload this row, use a **filter** in the “**Unloading**” panel, set according to a certain criterion, in this case, by the “code (ff1)” field.

Form Window x Input Data Window x Unloading x Batch loading x						
0/9						
Status	license ar...	license ar...	global feat...	data sourc...	Creation date	Row creator
✓	Wt578	AREA	Zapadno...	POSC	2019-12-06 15:20	POSC
✓	24543w	AREA	Demyanskiy	POSC	2019-12-06 10:41	POSC
✓	Wef43	REGION	Vostochno...	POSC	2019-12-06 10:41	POSC
✓	64700t	ZONE	Chupalskiy	POSC	2019-12-06 10:41	POSC
✓	2205tu	area	Vostochno...	POSC	2019-12-06 10:41	POSC
✓	335rew	Geotop	Kalchinckiy	POSC	2019-12-06 10:41	POSC
✓	rtg443	AREA	Kalchinckiy	POSC	2019-12-06 10:41	POSC
✓	2564	COUNTRY	Demyanskiy	POSC	2019-12-06 10:41	POSC
✓	546	COUNTRY	Chupalskiy	POSC	2019-12-06 15:11	POSC

Data filtering by creation date

The result of loading this record is shown in the figure.

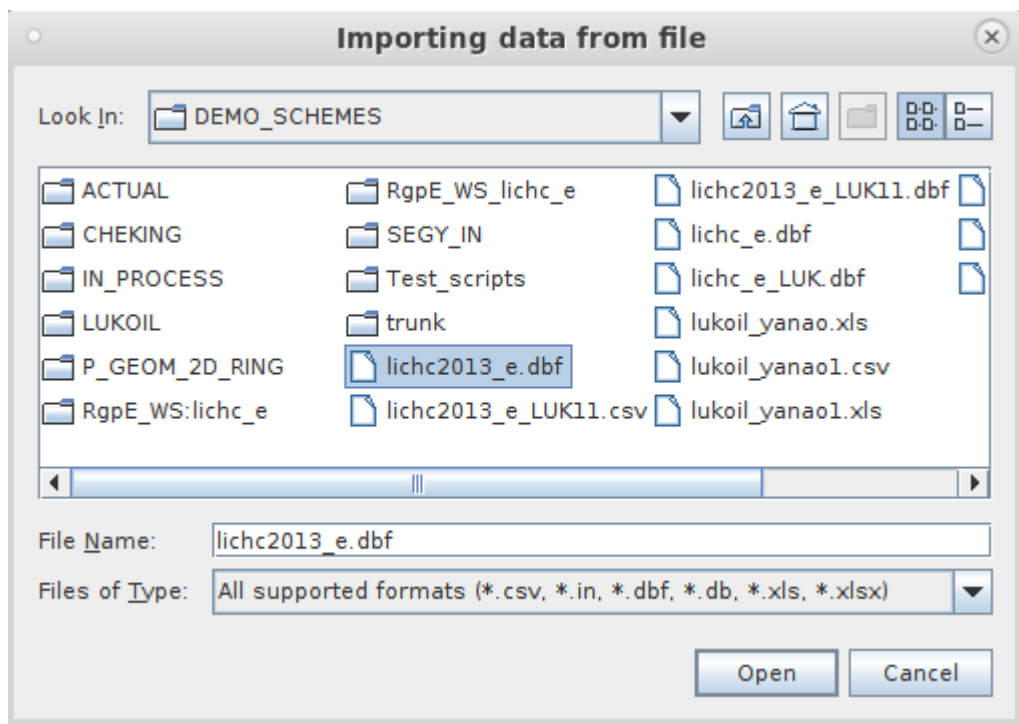
Form Window x Input Data Window x Unloading x Batch loading x						
0/9						
Status	license ar...	license ar...	global feat...	data sourc...	Creation date	Row creator
✓	Wt578	AREA	Zapadno...	POSC	2019-12-06 15:20	POSC
✓	24543w	AREA	Demyanskiy	POSC	2019-12-06 10:41	POSC
✓	Wef43	REGION	Vostochno...	POSC	2019-12-06 10:41	POSC
✓	64700t	ZONE	Chupalskiy	POSC	2019-12-06 10:41	POSC
✓	2205tu	area	Vostochno...	POSC	2019-12-06 10:41	POSC
✓	335rew	Geotop	Kalchinckiy	POSC	2019-12-06 10:41	POSC
✓	rtg443	AREA	Kalchinckiy	POSC	2019-12-06 10:41	POSC
✓	2564	COUNTRY	Demyanskiy	POSC	2019-12-06 10:41	POSC
✓	546	COUNTRY	Chupalskiy	POSC	2019-12-06 15:11	POSC

The result of loading the data

LOADING INPUT MATERIAL FROM A MEMO FIELD FILE

A **memo field** is a field in *.db* and *.dbf* file format that allows you to enter multi-line text. Field sizes are not limited. The load creates a link to a text file that can be viewed in Petrovision.

In order to fill in the table in the “**Input Data**” panel, it is necessary to import data from a file with saved results.



Importing data from an input file

On importing material, the following procedures are performed:

1. The fields calculated in the "Preprocessing" dialog (in this example, one field - PV_UWI) remain empty, check the boxes next to the fields, and click the *Auto* button, or select the field values manually in the "Mapping" section. Calculated fields are those fields whose values will be substituted when opening the input file, based on the values of any other fields
2. The use of transformations (pre-processing). Select possible pre-processing calculations (in this example: "calculate PV_UWI").

Format of import

Formats: + default

Routine Sets

☒ ВЫЧИСЛИТЬ PV_UWI

General

☐ Detailed log

Delimiter decimal: (Dot)

Format date: yyyy-MM-dd

Mapping

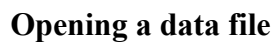
PV_UWI (ff1)	<empty>	<input checked="" type="checkbox"/>
UWI (ff2)	UWI	<input type="checkbox"/>
lab number (ff3)	LAB_N	<input type="checkbox"/>
date picking (ff4)	DATA	<input type="checkbox"/>
kern diameter (ff5)	DIAM_K	<input type="checkbox"/>
slotting number (ff6)	N_DOLB	<input type="checkbox"/>
formation code (ff7)	KOD_PL	<input type="checkbox"/>

Auto Reset

OK Cancel

Pre-processing window

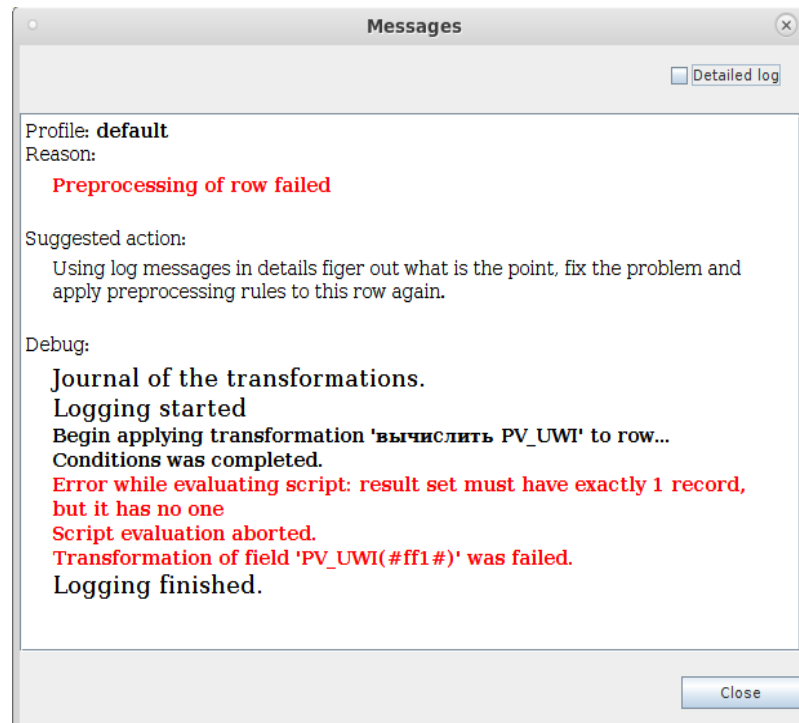
In the “**System Log Window**” you can track the process of the script, and after processing all the data, the material is correctly imported into the “**Input Data**” table, each entry is marked with a “**Ready for Loading**” icon. In the column where the memo field should be (in this case, the ff50 field), a link to the text file is created.



Form Window Input Data Window Unloading Batch loading 0/40										
S...	1	PV_UWI (ff1)	UWI (ff2)	lab numbe...	date pickin...	kern diam...	slotting nu...	formation ...	sinking (ff8)	kern take
				33001103...	2005-10-10	80.0	1.0	103	8.0	8.0
				33001103...	2005-10-10	80.0	1.0	103	8.0	8.0
				33001103...	2005-10-10	80.0	1.0	103	8.0	8.0
				33001103...	2005-10-10	80.0	1.0	103	8.0	8.0
		W033572	00633000...	33000192...	2006-01-20	100.0	7.0	999	5.0	3.3
		W034057	00633002...	33001103...	2005-10-10	80.0	1.0	103	8.0	8.0
		W033572	00633000...	33000192...	2006-01-20	100.0	7.0	999	5.0	3.3
		W033572	00633000...	33000192...	2006-01-20	100.0	9.0	104	7.0	3.57
		W025963	01533600...	33600181...	1999-10-21	100.0	8.0	203	6.0	5.0
		W025963	01533600...	33600181...	1999-10-21	100.0	8.0	203	6.0	5.0
		W025963	01533600...	33600181...	1999-10-21	100.0	8.0	203	6.0	5.0
		W025963	01533600...	33600181...	1999-10-21	100.0	8.0	203	6.0	5.0
		W033572	00633000...	33000192...	2006-01-20	100.0	4.0	103	7.0	4.14
		W033572	00633000...	33000192...	2006-01-20	100.0	7.0	999	5.0	3.3
		W033572	00633000...	33000192...	2006-01-20	100.0	7.0	999	5.0	3.3
		W033572	00633000...	33000192...	2006-01-20	100.0	8.0	999	9.5	7.46

Incorrectly imported rows

After sorting, the incorrectly imported rows appear at the top of the table, and all these entries have the status “**Import Error**”. It is necessary to find out the cause of the error and eliminate it. Double-clicking on the line of interest will display a window with a detailed description of the error. After fixing the error, repeat the import.



A window with a detailed description of the error








Data should also be sorted by the *Status* column after a quality control check, since not all the data can satisfy the quality of the check. Lines that fail the quality control check appear at the top of the table, and all these records have the status “**Invalid Row**”. It is necessary to find out the cause of the error and eliminate it. Double-clicking on the line of interest will display a window with a detailed description of the error.

An example of data that has failed a quality control check

The result of loading data with memo fields is shown in the figure.

The result of loading data with memo fields

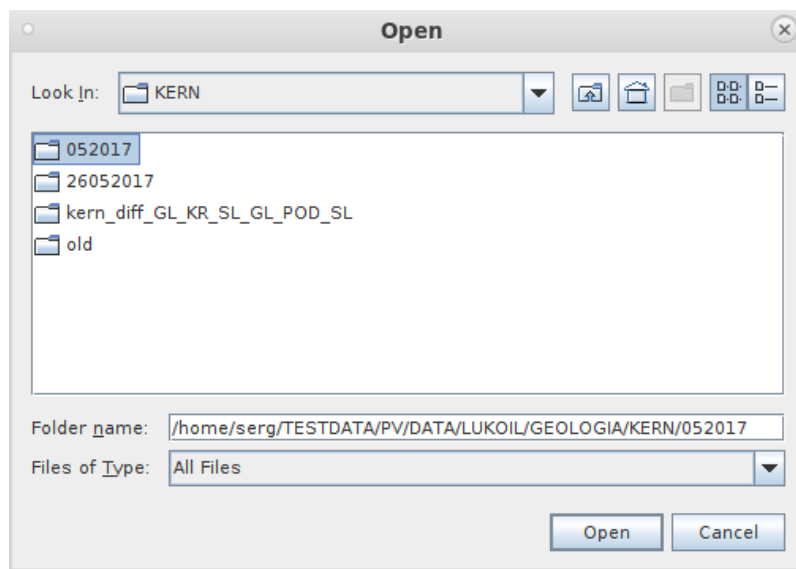
To view the result of this example in Petrovision, you need to find the field in the spatial tree and the well for which the data is loaded. In this case: well - 255848006G00518G, field - Tazovsky. Select an appropriate presentation table. The table with the loaded data is displayed. A link to a text file is created in the memo field "FILE_NAME", which can be opened by double-clicking on the left mouse button.

КЕРН	КАМЕРАЛЬН_ЛИТОЛ	<input checked="" type="checkbox"/> с расшифровкой											1-7 из 7 выделено 0
	UWI	ГЛ_КРО...	НОМ...	ИМЯ_П...	ВЫНОС...	ВЫН...	МОЩ...	ГЛ_ПОД...	ГЛ_КРОВЛ...	ГЛ_ПОД...	ФОР...	ИМЯ_ФАЙЛА	ДАТА_КАМ...
	255848006G00518G 3494	3494	1	Б/20	13.74	98.14	4.9	3498.9	3493.7	3498.6	ASCII	\$KERN/W058047/LIT_KER/3494_667_98.14_3498.8_1.txt	30.09.2011
	255848006G00518G 3498.9	3498.9	1	Б/20	13.74	98.14	.75	3499.65	3498.6	3499.35	ASCII	\$KERN/W058047/LIT_KER/3498.9_667_98.14_3499.65_1.txt	30.09.2011
	255848006G00518G 3499.65	3499.65	1	Б/20	13.74	98.14	.35	3500	3499.35	3499.7	ASCII	\$KERN/W058047/LIT_KER/3499.65_667_98.14_3500_1.txt	30.09.2011
	255848006G00518G 3500	3500	1	Б/20	13.74	98.14	3.72	3503.72	3499.7	3503.42	ASCII	\$KERN/W058047/LIT_KER/3500_667_98.14_3503.72_1.txt	30.09.2011
	255848006G00518G 3503.72	3503.72	1	Б/20	13.74	98.14	2.6	3506.32	3503.42	3506.02	ASCII	\$KERN/W058047/LIT_KER/3503.72_667_98.14_3506.32_1.txt	30.09.2011
	255848006G00518G 3506.32	3506.32	1	Б/20	13.74	98.14	.52	3506.84	3506.02	3506.54	ASCII	\$KERN/W058047/LIT_KER/3506.32_667_98.14_3506.84_1.txt	30.09.2011
	255848006G00518G 3506.84	3506.84	1	Б/20	13.74	98.14	.9	3507.74	3506.54	3507.44	ASCII	\$KERN/W058047/LIT_KER/3506.84_667_98.14_3507.74_1.txt	30.09.2011

Viewing the result of loading data with memo fields in PetroVision

BATCH LOADING FOR ONE TEMPLATE/SCHEME

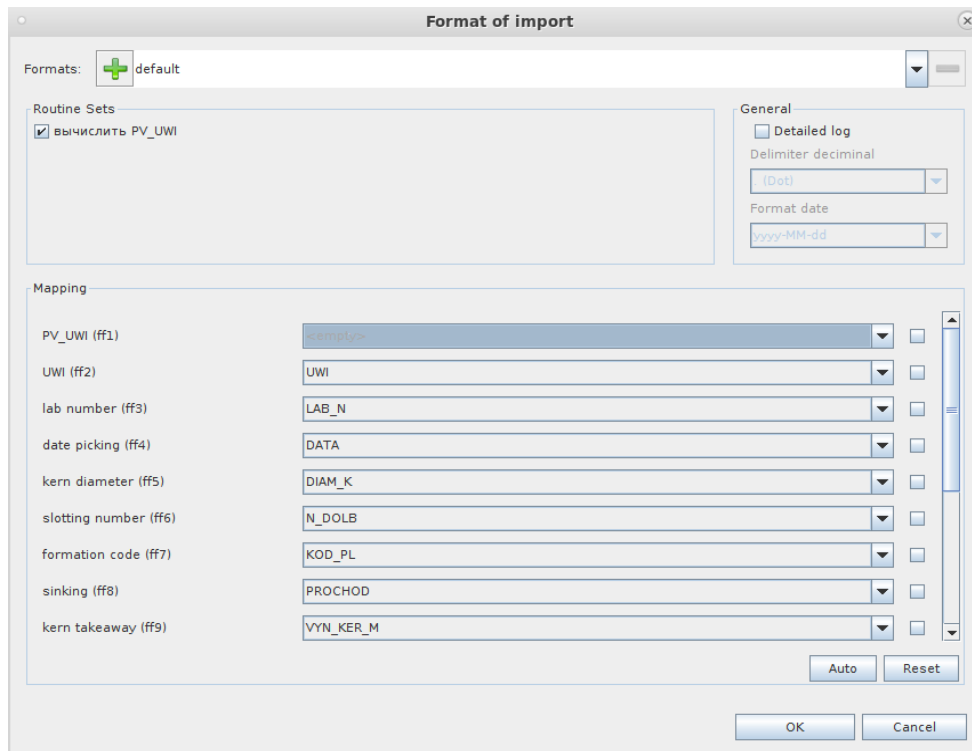
To process files in an entire directory, you need to specify the directory with files in the file selection dialog instead of just a file. To select necessary files from a directory, an external program or script is used, the task of which is to independently read all the necessary data in any way. This external program is called a **batch loader**. With this type of loading, the directory is scanned, and then tabular data is extracted from the file and imported into the “***Input data***”.



Importing data from a specified directory

In the “*Import Format*” window, set the fields to be automatically filled out by clicking the *Auto* button, or manually select the field values.

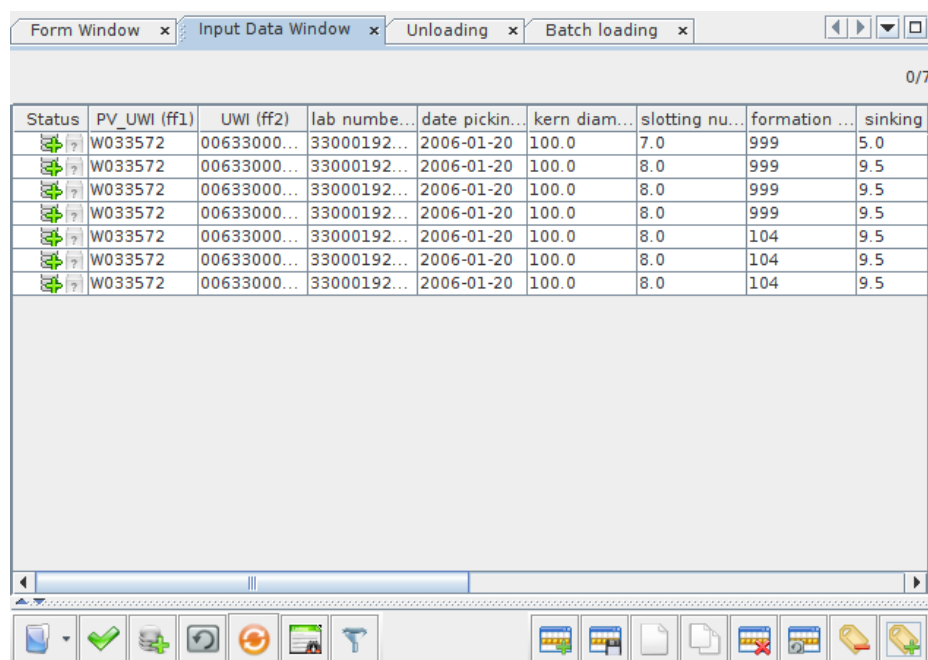
Select the checkbox for possible calculated fields called “*Preprocessing*” (in this example, “calculate PV_UWI”). These are fields whose values are calculated based on external data. External data can include values of other fields in the set, already loaded data in the database, attributes of the source material (such as file size, file type or hash sum).



The "Format of import" dialog box is used to configure data import settings. It includes a "Routines Sets" section with a checked option "Вычислить PV_UWI". The "General" section has a "Detailed log" checkbox and dropdowns for "Delimiter decimal" (set to ".(Dot)") and "Format date" (set to "yyyy-MM-dd"). The "Mapping" section contains a list of fields with corresponding dropdown menus: PV_UWI (ff1) to "example", UWI (ff2) to "UWI", lab number (ff3) to "LAB_N", date picking (ff4) to "DATA", kern diameter (ff5) to "DIAM_K", slotting number (ff6) to "N_DOLB", formation code (ff7) to "KOD_PL", sinking (ff8) to "PROCHOD", and kern takeaway (ff9) to "VYN_KER_M". Buttons for "Auto", "Reset", "OK", and "Cancel" are at the bottom.

Preprocessing window













































In the “**System Log Panel**”, you can track the process of a script, and after processing all the data the material will be correctly imported into the “**Input Data**” table, each entry will be marked with the “**Ready for Loading**” icon. After the quality control, the data can be loaded to the database. To do this, use the “**Load Data**” function. Upon completion of the data loading, a message appears with the result of loading the input material.



The "Input Data Window" shows a table of data with 9 columns: Status, PV_UWI (ff1), UWI (ff2), lab numbe..., date pickin..., kern diam..., slotting nu..., formation ..., and sinking. The table contains 7 rows of data. Each row has a green checkmark icon in the Status column. The bottom of the window features a toolbar with various icons for file operations and data management.

Status	PV_UWI (ff1)	UWI (ff2)	lab numbe...	date pickin...	kern diam...	slotting nu...	formation ...	sinking
✓	W033572	00633000...	33000192...	2006-01-20	100.0	7.0	999	5.0
✓	W033572	00633000...	33000192...	2006-01-20	100.0	8.0	999	9.5
✓	W033572	00633000...	33000192...	2006-01-20	100.0	8.0	999	9.5
✓	W033572	00633000...	33000192...	2006-01-20	100.0	8.0	999	9.5
✓	W033572	00633000...	33000192...	2006-01-20	100.0	8.0	104	9.5
✓	W033572	00633000...	33000192...	2006-01-20	100.0	8.0	104	9.5
✓	W033572	00633000...	33000192...	2006-01-20	100.0	8.0	104	9.5

Opening a data folder

Form Window		Input Data Window		Unloading		Batch loading		
4001/4007								
Status	PV UWI (ff1)	UWI (ff2)	lab numbe...	date pickin...	kern diam...	slotting nu...	formation ...	sinki
 	W029525	01238250...	38202517...	1993-07-21	80.0	10.0	999	5.0
 	W029525	01238250...	38202517...	1993-07-21	80.0	10.0	999	5.0
 	W029525	01238250...	38202517...	1993-07-21	80.0	10.0	999	5.0
 	W029525	01238250...	38202517...	1993-07-21	80.0	10.0	999	5.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	3.0	251	12.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	3.0	251	12.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	3.0	251	12.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	3.0	251	12.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0
 	W042839	43217000...	17010268...	1994-03-10	80.0	4.0	251	14.0

The result of batch loading

LOADING DATA IN MULTI-PROFILE DATASETS

In order to load data in multi-profile sets, you need to fill out the table in the **"Input Data"** panel. Select a file with data in the file selection dialog. Perform a data quality control check. If the data meets the quality control requirements, then each record is marked with the status **"Ready for Loading"**, and the **"Load Data"** function can be used. For example, in the figure below, it is planned to download 2D seismic data.

Status	Implement...	Executor (f...	Area/Profil...	File name ...	Format (ff5)	Shooting t...	S
Ready for Loading	656	111420	2D:POV:65...	2d_def-18...	WORD	2D	□
Ready for Loading	656	111420	2D:POV:65...	2d_rep-55...	compress	2D	□
Ready for Loading	656	111420	2D:POV:65...	2d_shema...	TIFF	2D	□
Ready for Loading	656	111420	2D:POV:65...	2d_kach-6...	TIFF	2D	□
Ready for Loading	656	111420	2D:POV:65...	2d_s_vyso...	EXCEL	2D	□
Ready for Loading	656	111420	2D:POV:65...	2d_apr_st...	WORD	2D	□
Ready for Loading	656	111420	2D:POV:65...	2d_akt-07...	WORD	2D	□
Ready for Loading	656	111420	2D:POV:65...	2d_apr-09...	ASCII	2D	□
Ready for Loading	656	111420	2D:POV:65...	2d_stat fi...	WORD	2D	○
Ready for Loading	656	111420	2D:POV:65...	2d_stat fi...	WORD	2D	○
Ready for Loading	656	111420	2D:POV:65...	2d_vel-39.txt	WORD	2D	○
Ready for Loading	656	111420	2D:POV:65...	2d_vel-73.txt	WORD	2D	○
Ready for Loading	656	111420	01	2d_abr-06...	TIFF	2D	□
Ready for Loading	656	111420	01	2d_rep-55...	compress	2D	□

Preparing 2D seismic input material

When the loading is finished, a window is displayed with a message about successfully loaded and not loaded data. If the loading fails, you need to find out the cause of the error and fix it. Double-clicking on the line of interest will display a window with a detailed description of the error. After fixing the error, repeat the loading.

In multi-profile unloading, the **"Choose Profiles"** button is located at the top of the **"Filter"** panel, which serves to unload material loaded on a specific profile. Next to the button there are all profiles involved in unloading.

Select 161 profile(s) from 161 profile(s)

[Choose Profiles](#) 2D Field Acceptance Certificate; 2D Profile Hardware diagnostics; [Full list](#)

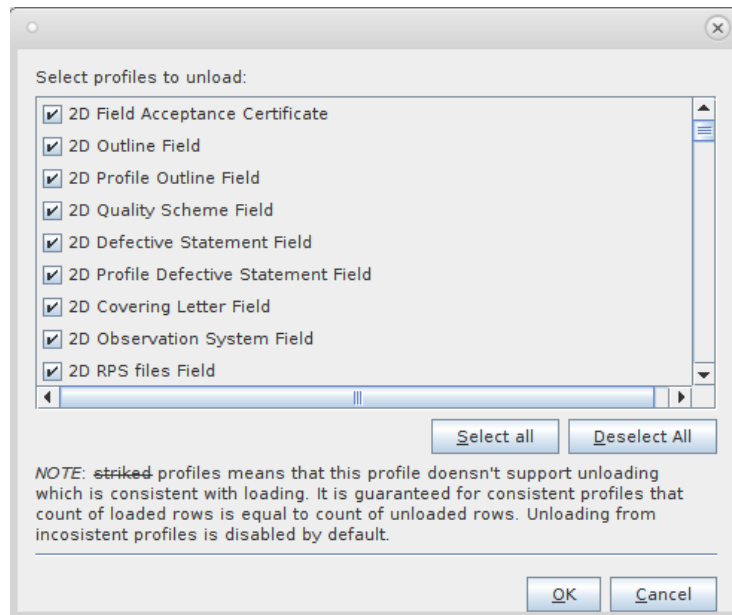
☒ match all constraints ☐ match any constraint ☐ all data

Field	Constraint	Field/Value	Add/remove constraint
Implementing organization...	equal	Implementing organization (ff1)

[Unload](#)

Setting the unloading panel

By default, all profiles for unloading are selected.



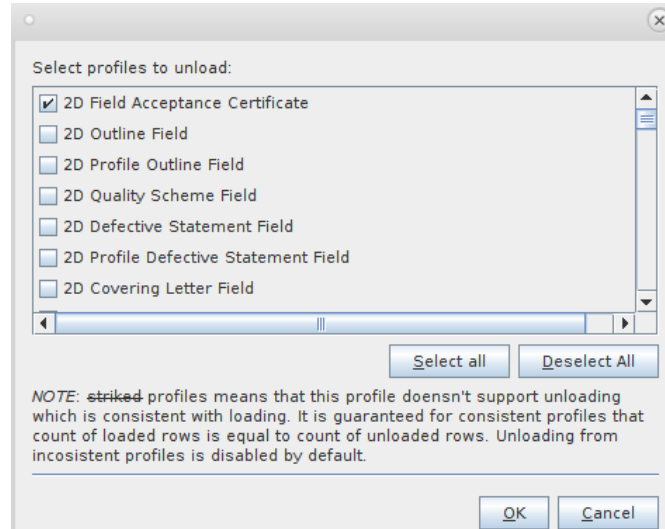
Profile selection window

The unloaded material for all profiles in the “*Unloading*” panel is shown in the figure

0/9005								
Status	Implement...	Executor (f...	Area/Profil...	File name ...	Format (ff5)	Shooting t...	Section (ff7)	Docum
✓	388	0309	2D:VNT:38...	akt_final_0...	WORD			
✓	656	111420	2D:POV:65...	2d_akt-07...	WORD			
✓	663	1411	2D:TVR:66...	akt_1411...	ASCII			
✓	663	55041	2D:OOO:6...	5504Leu_...	compress			
✓	663	5510	2D:OOO:6...	5510_akt_...	WORD			
✓	999	12345	2D:NAX:99...	2d_akt.docx	WORD			
✓	999	15010	2D:NAX:99...	15010_akt...	ASCII			
✓	656	11142	2D:POV:65...	Abris.rar	compress			
✓	663	1411	2D:TVR:66...	abris_141...	JPEG			
✓	663	1514	2D:NOY:6...	1514_abri...	JPEG			
✓	663	1714	2D:VNT:66...	Abris.jpg	JPEG			
✓	663	5510	2D:OOO:6...	5510_abri...	JPEG			
✓	512	UMG16	001	Abris_001.7z	ASCII			
✓	512	UMG16	005	Abris_005.7z	ASCII			
✓	512	UMG16	006	Abris_006.7z	ASCII			
✓	512	UMG16	007	Abris_007.7z	ASCII			
✓	512	UMG16	008	Abris_008.7z	ASCII			
✓	512	UMG16	018	Abris_018.7z	ASCII			

Unloaded material for all profiles

If you need to unload material related to a specific profile, then in the “*Select Profiles*” dialog box you need to uncheck the profiles that should not be involved in the unloading. In this example, we unload data for the “2D Field Acceptance Certificate” profile.



Profile selection window

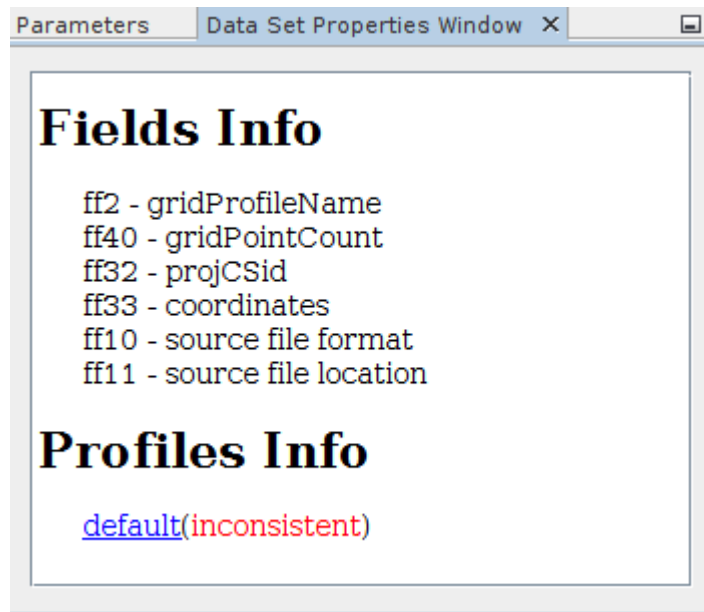
The unloaded material for the selected “2D Field Acceptance Certificate” profile in the “*Unloading*” panel is shown in the figure.

Form Window x Input Data Window x Unloading x Batch loading x									
0/7									
Status	Implement...	Executor (f...	Area/Profil...	File name ...	Format (ff5)	Shooting t...	Section (ff7)	Document ...	Creatio
	388	0309	2D:VNT:38...	akt_final_0...	WORD				
	656	111420	2D:POV:65...	2d_akt-07....	WORD				
	663	1411	2D:TVR:66...	akt_1411....	ASCII				
	663	55041	2D:OOO:6...	5504Leu_...	compress				
	663	5510	2D:OOO:6...	5510_akt_...	WORD				
	999	12345	2D:NAX:99...	2d_akt.docx	WORD				
	999	15010	2D:NAX:99...	15010_akt...	ASCII				

Unloaded material for “2D Field Acceptance Certificate”

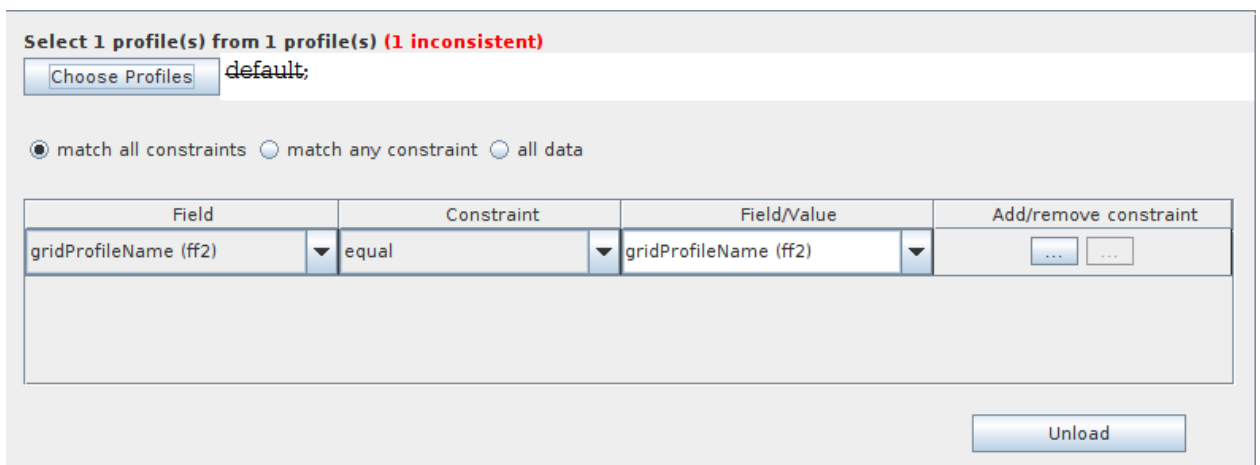
Inconsistent profiles

Profiles, for which unloading the same number of rows that was loaded is guaranteed, are called consistent. If unloading of the same number of rows cannot be guaranteed, then the profile is inconsistent. Unloading from inconsistent profiles gives more rows than there were loaded, and it is disabled by default. In the loader interface, you can see that the names of such profiles are different from the rest. In the properties of a dataset, such profiles are marked with the word "inconsistent".



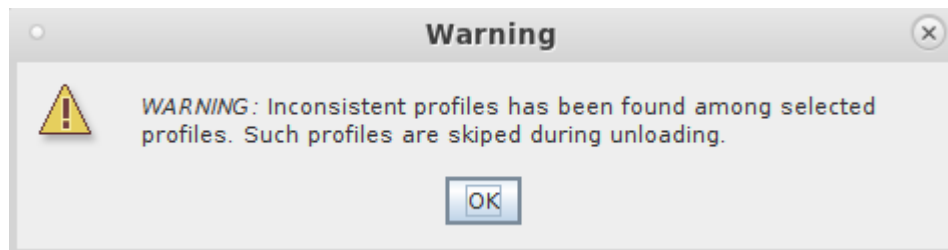
“Dataset Properties” window

In the filter conditions dialog, profiles are also marked.



Filter conditions window

When trying to unload data for these profiles, the user will see a warning message:



A warning message

Data related to inconsistent profiles is not uploaded by default

LOADING TOPOGRAPHICAL DATA

In order to load information of the “geometry” type from files containing a field in SDO format to the database, fill out the table in the “**Input Data**” panel. This is done by importing a file with saved results, or filling out a table using the “**Form**” panel.

Consider an example of importing an input file of SDO type. After the data is displayed in the “**Input Data**” table, we check the quality control of the data and load it into the database using the “**Load Data**” button. An input format is determined by the scheme itself.

Status	PV_UWI (ff1)	Unique ke...	Area code ...	Field code ...	Bunch id (f...	Well id (ff6)	Conditiona...	Conditiona...	Conditiona...	Coni...
+	W049179	01334200...	013	342	001_	00001B	835658.6	388286.0	835658.6	3882...
+	W071222	51105100...	511	051	003_	00001B	804467.0	308855.7	804449.1	3084...
+	W018797	01126300...	011	263	008_	00001B	783731.8	317599.6	783632.3	3178...
+	W024035	01433100...	014	331	009_	00001B	811266.0	363180.0	811666.0	3629...
+	W028626	00334908...	003	349	087_	00001B	828308.0	355293.1	828226.6	3546...
+	W019507	00830320...	008	303	203_	00001B	782908.0	334436.8	782908.0	3344...
+	W029481	01238251...	012	382	519_	00001B	781476.4	345329.7	781417.5	3449...
+	W020633	00932304...	009	323	042_	00001K	794510.0	352314.4	794905.8	3527...
+	W019508	00830322...	008	303	220_	00001K	777493.0	335076.5	777857.9	3354...
+	W018798	01126300...	011	263	000_	00001P	781964.1	308701.6	781964.1	3087...
+	W028613	01334200...	013	342	000_	00001P	840097.6	388200.3	840097.6	3882...

Loading information of the “geometry” type

The result of loading information of the “geometry” type is shown in the figure.

S... 1	PV_UWI (ff1)	Unique ke...	Area code ...	Field code ...	Bunch id (f...	Well id (ff6)	Conditiona...	Conditiona...	Conditiona...	Coni...
+	W049179	01334200...	013	342	001_	00001B	835658.6	388286.0	835658.6	3882...
+	W071222	51105100...	511	051	003_	00001B	804467.0	308855.7	804449.1	3084...
+	W018797	01126300...	011	263	008_	00001B	783731.8	317599.6	783632.3	3178...
+	W024035	01433100...	014	331	009_	00001B	811266.0	363180.0	811666.0	3629...
+	W028626	00334908...	003	349	087_	00001B	828308.0	355293.1	828226.6	3546...
+	W019507	00830320...	008	303	203_	00001B	782908.0	334436.8	782908.0	3344...
+	W029481	01238251...	012	382	519_	00001B	781476.4	345329.7	781417.5	3449...
+	W020633	00932304...	009	323	042_	00001K	794510.0	352314.4	794905.8	3527...
+	W019508	00830322...	008	303	220_	00001K	777493.0	335076.5	777857.9	3354...
+	W018798	01126300...	011	263	000_	00001P	781964.1	308701.6	781964.1	3087...
+	W028613	01334200...	013	342	000_	00001P	840097.6	388200.3	840097.6	3882...

Loading result

Input field values for SDO data should be as follows:

SDO:

<coordinate system name>\t[<name of datum transformation in WGS84>]

<x1>\t<y1>

<x2>\t<y2>

....

Valid example of SDO type data:

20013

329440 774275

330418 776465

331921 777372

335518 779789

336933 783102

341952 782684

336984 770224

....

330326 772072

330336 772079

Valid example of datum transformation for SDO format:

20013 1257

329440 774275

330418 776465

331921 777372

335518 779789

336933 783102

341952 782684


336984 770224

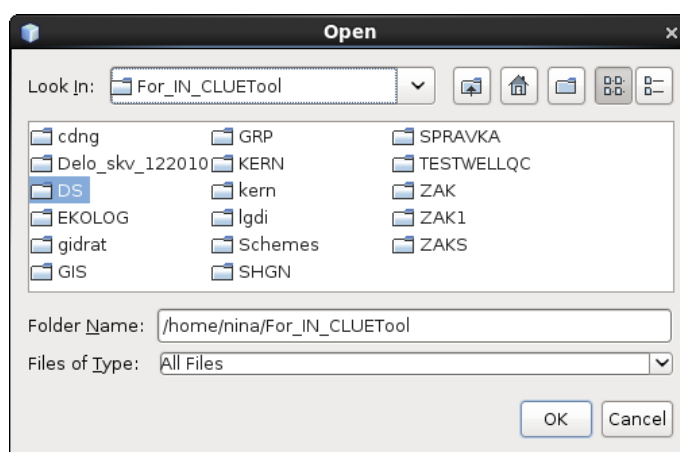
....

330326 772072

330336 772079

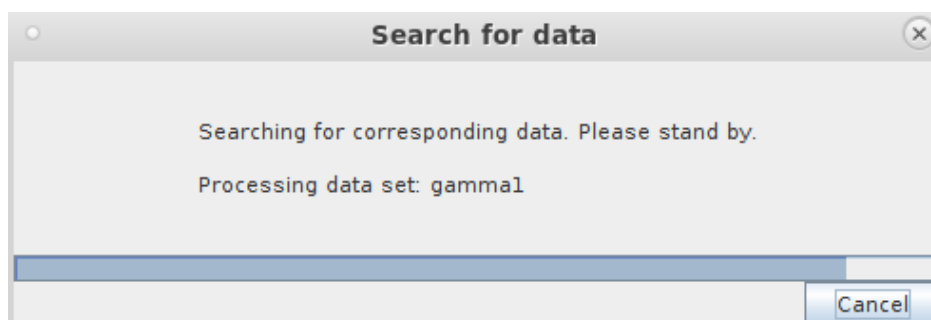
BATCH LOADING

In order to process files simultaneously in all templates, you need to specify in the file selection dialog a common directory with files for a selected direction. The application automatically processes the directory submitted to input, and as a result all available files will be read and extracted. To load data, open the selection dialog using the  command – **Choose Import Directory** and click on the OK button.



Importing files from a directory

During importing/scanning of the directory, the “Data Search” window will start in the form of a progress window where the user can track the process and get information about the dataset being processed at the moment.

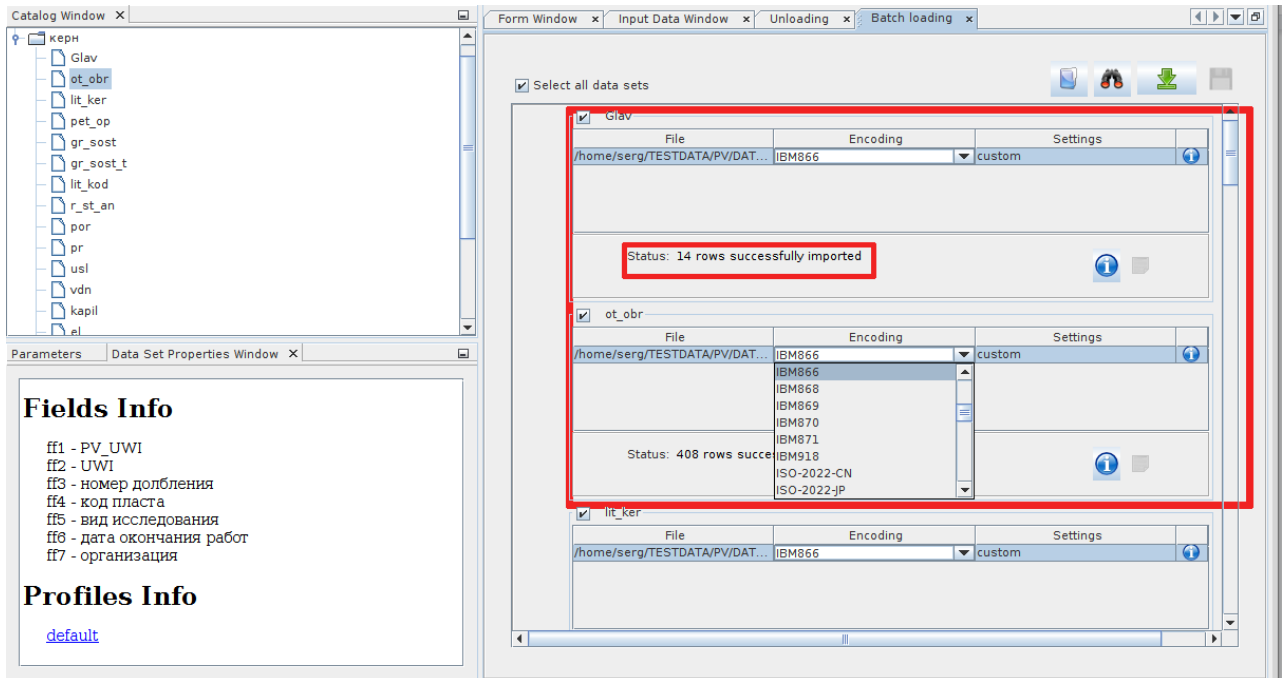


Data search


After successful completion, in each set where the file was found, a row with information about the file, its encoding and file settings will be filled in. Under each set, a status bar called *Status* is added, where a message about the result of execution will be displayed.

The user has an opportunity to view or change some parameters that the application automatically determined. On double-clicking on a value of the *Settings* column, the already

familiar *Preprocessing* window will be displayed. Left-clicking on a column value in the *Encoding* table displays a selection that provides the information stored in this field. Such structure makes the work with file data easier.



Filling in the panel


With this type of loading, tabular data is extracted from files that can be opened by clicking on the  icon - **Compiled data**. You can perform various manipulations with them using the available commands, which are standardly present in any panel.

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Sta...	PV_U...	UWI (ff2)	lab nu...	date p...	kern d...	slottin...	forma...	sinkin...	kern t...	kern t...	kern t...	kern t...	sampl...	sampl...	sampl...	lab nu...
W070...	50142...	42700...	2015-...	100.0	1.0	999	5.0	4.3	86.0				0.41	2561.41	2560.21	427-3...
W070...	50142...	42700...	2015-...	100.0	1.0	999	5.0	4.3	86.0				1.88	2562.88	2561.68	427-3...
W070...	50142...	42700...	2015-...	100.0	1.0	999	5.0	4.3	86.0				1.88	2562.88	2561.68	427-3...
W070...	50142...	42700...	2015-...	100.0	1.0	999	5.0	4.3	86.0				2.53	2563.53	2562.33	427-3...
W070...	50142...	42700...	2015-...	100.0	1.0	999	5.0	4.3	86.0				3.31	2564.31	2563.11	427-3...
W070...	50142...	42700...	2015-...	100.0	1.0	999	5.0	4.3	86.0				3.72	2564.72	2563.52	427-3...
W070...	50142...	42700...	2015-...	100.0	1.0	999	5.0	4.3	86.0				3.72	2564.72	2563.52	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	999	13.0	13.0	100.0				1.65	2567.65	2565.95	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	999	13.0	13.0	100.0				4.5	2570.5	2568.8	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	999	13.0	13.0	100.0				7.44	2573.44	2571.74	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	999	13.0	13.0	100.0				9.68	2575.68	2573.98	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	999	13.0	13.0	100.0				1.58	2567.58	2565.88	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	999	13.0	13.0	100.0				1.58	2567.58	2565.88	427-3...
W070...	50142...	42700...	2015-...	100.0	10.0	208	10.6	10.55	99.53				1.88	2686.58	2686.38	427-3...
W070...	50142...	42700...	2015-...	100.0	10.0	208	10.6	10.55	99.53				1.88	2686.58	2686.38	427-3...
W070...	50142...	42700...	2015-...	100.0	10.0	208	10.6	10.55	99.53				1.88	2686.58	2686.38	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	262	13.0	13.0	100.0				11.44	2577.44	2575.74	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	262	13.0	13.0	100.0				11.69	2577.69	2575.99	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	262	13.0	13.0	100.0				12.04	2578.04	2576.34	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	262	13.0	13.0	100.0				12.04	2578.04	2576.34	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	262	13.0	13.0	100.0				12.19	2578.19	2576.49	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	262	13.0	13.0	100.0				12.38	2578.38	2576.68	427-3...
W070...	50142...	42700...	2015-...	100.0	2.0	262	13.0	13.0	100.0				12.77	2578.77	2577.07	427-3...

Compiled data

Finding Duplicates

The application looks for rows with identical contents in the file. After using the  button - **Find Duplicates**, a message with the result will be added to the *Status*.

This may be required when further loading data into the database.

Form Window x Input Data Window x Unloading x Batch loading x

☒ Select all data sets

☒ Glav

File	Encoding	Settings
/home/serg/TESTDATA/PV/DATA...	IBM866	custom

Status: found 0 duplicate rows

☒ ot_obr

File	Encoding	Settings
/home/serg/TESTDATA/PV/DATA...	IBM866	custom

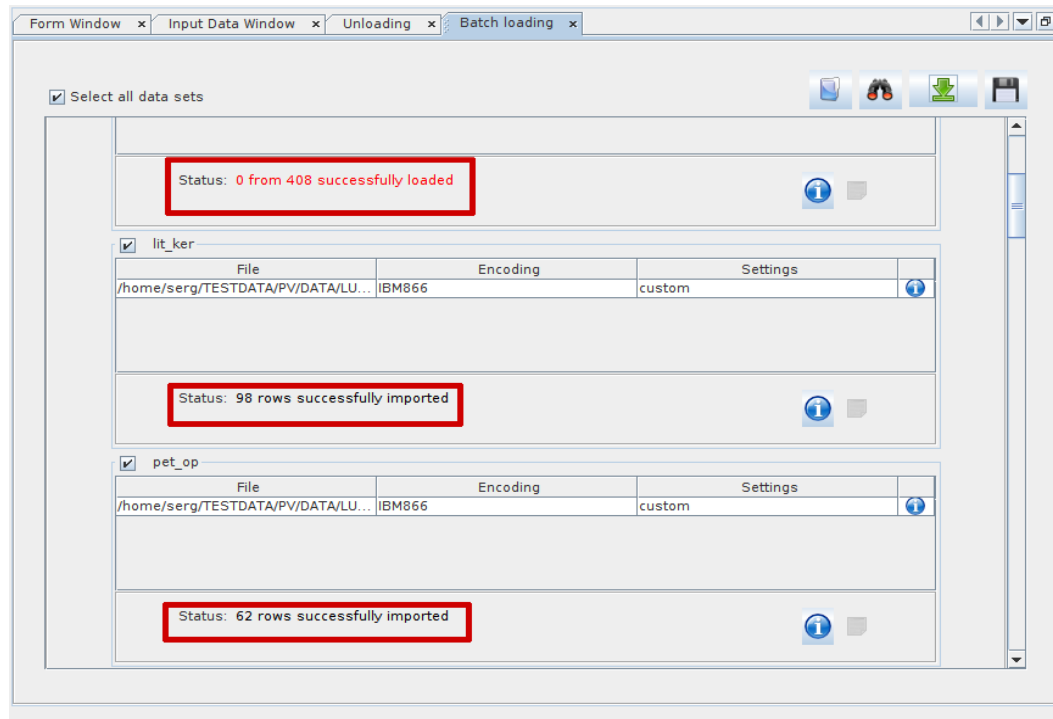
Status: found 0 duplicate rows

☒ lit_ker

File	Encoding	Settings
/home/serg/TESTDATA/PV/DATA...	IBM866	custom

LOADING DATA

After the loading is completed, the user will be informed by a message in *Status* about the number of successfully loaded data and of unloaded, if any.



Save Invalid Data - Saving invalid rows to a file

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Sta...	PV U...	UWI (f...	lab n...	date ...	kern ...	slotti...	form...	sinki...	kern ...	kern ...	kern ...	kern ...	samp...	sam...	samp...	lab n...
W059...	0093...	3230...	2011...	100.0	1.0	999	9.0	8.63	95.89				0.39	2722...	2722...	323...
W059...	0093...	3230...	2011...	100.0	1.0	999	9.0	8.63	95.89				1.3	2723.0	2723.0	323...
W059...	0093...	3230...	2011...	100.0	1.0	999	9.0	8.63	95.89				1.68	2723...	2723...	323...
W059...	0093...	3230...	2011...	100.0	1.0	999	9.0	8.63	95.89				1.68	2723...	2723...	323...
W059...	0093...	3230...	2011...	100.0	1.0	999	9.0	8.63	95.89				1.68	2723...	2723...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				3.45	2725...	2725...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				3.82	2725...	2725...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				3.96	2725...	2725...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				4.36	2726...	2726...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				2.48	2724...	2724...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				2.48	2724...	2724...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				2.48	2724...	2724...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				2.48	2724...	2724...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				4.75	2726...	2726...	323...
W059...	0093...	3230...	2011...	100.0	1.0	208	9.0	8.63	95.89				5.13	2726...	2726...	323...

In order to update a data row, you need to unload the material from the database. With a large amount of loaded material, it is advisable to pre-configure the data filter according to a certain condition to facilitate the search and unloading of data.

Material has been unloaded from the database to the table. The table counter displays the number of rows. Select one or several rows for updating by any possible selection method and click the "***Update Selected Records***" button.



















Form Window

Input Data Window

Unloading

Batch loading

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Status	PV_UWI (ff1)	UWI (ff2)	lab numbe...	date pickin...	kern diam...	slotting nu...	formation ...	sinkin...
	W020729	00932314...	32300145...	1999-08-04	80.0	5.0	109	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	5.0	109	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	5.0	109	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	5.0	109	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	6.0	111	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	6.0	111	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	6.0	111	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	6.0	111	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	6.0	111	7.0
	W020729	00932314...	32300145...	1999-08-04	80.0	6.0	111	7.0
	W020328	01731400...	31400112...	2002-01-18	100.0	2.0	107	5.0
	W020328	01731400...	31400112...	2002-01-18	100.0	2.0	107	5.0
	W020328	01731400...	31400112...	2002-01-18	100.0	2.0	107	5.0
	W020328	01731400...	31400112...	2002-01-18	100.0	2.0	107	5.0
	W020328	01731400...	31400112...	2002-01-18	100.0	2.0	107	5.0
	W020328	01731400...	31400112...	2002-01-18	100.0	2.0	107	5.0
	W020328	01731400...	31400112...	2002-01-18	100.0	2.0	107	5.0
	W044403	01533600...	33600186...	2000-09-27	100.0	3.0	203	5.0

Unloaded material

Now go to the "***Input Data***" panel. The rows selected for updating are displayed here.

Status	PV_UWI (ff1)	UWI (ff2)	lab numbe...	date pickin...	kern diam...	slotting nu...	formation ...	sinking
0/1	W020729	00932314...	32300145...	1999-08-04	80.0	6.0	111	7.0

Data for updating

Then go to the “**Form**” panel and change the necessary values.

Form Window x Input Data Window x Unloading x Batch loading x

1/1

slotting number: 6.0

formation code: 111

sinking: 7.0

kern takeaway: 5.39

kern takeaway: 77.0

kern takeaway from sandstones:

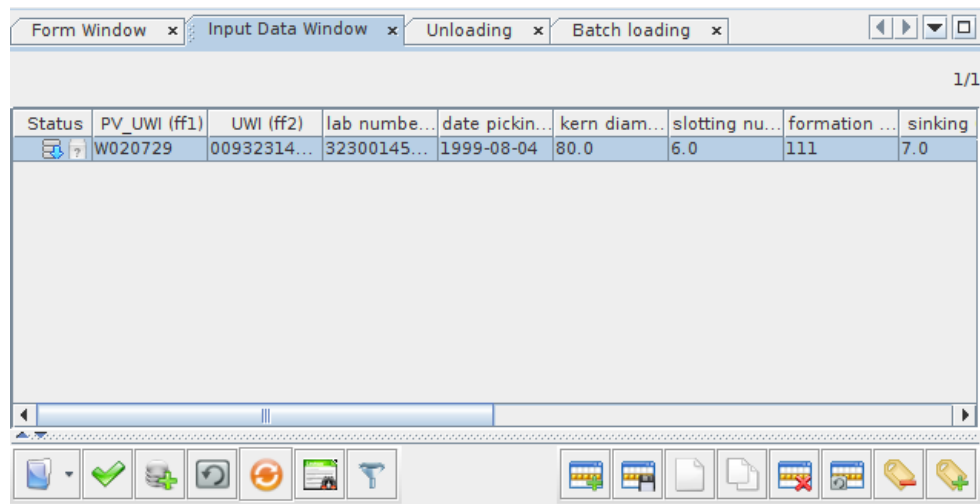
kern takeaway from sandstones:

sampling place: 1.46

Data editing

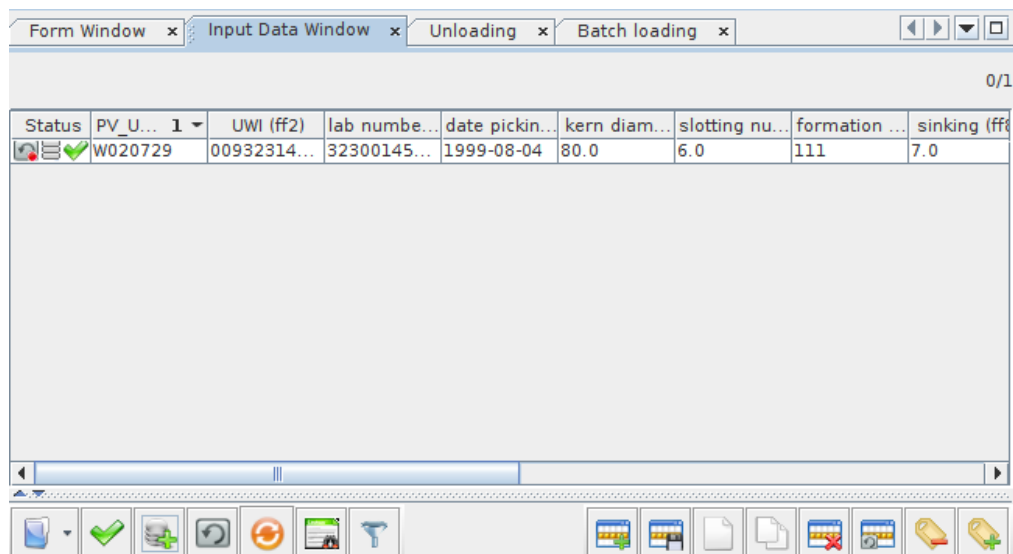
Return to the “**Input Data**” table; the row values are changed and the row has a status “**The Row Needs Updating**”. Use the “**Load Data**” button. A window is displayed with a message about the result of the loading.

In the event of a failure the row will not be updated, and it is necessary to find out the cause of the error by double-clicking on the row of interest, return to the “**Form**” panel and correct the field containing the error.



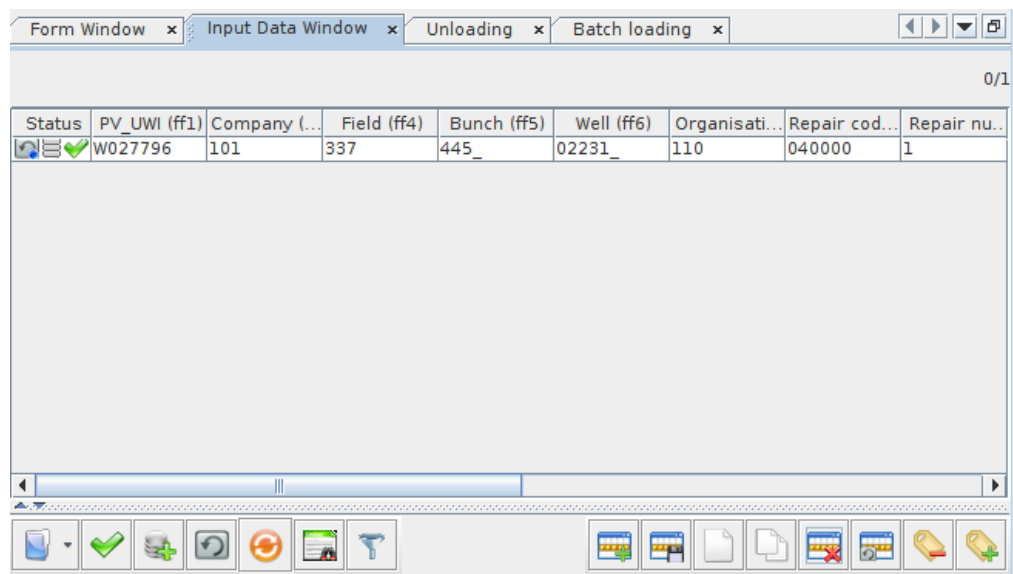
Data waiting for an update to load

After that, apply the “**Load Data**” option. After the loading has been completed, the status of the row will indicate whether the operation is effective. If it is effective, i.e. there are some changes in the database after its execution, a marker of an effective operation appears in the status - a red dot in the lower right corner of the cancellation status icon.




Effective data updating

If it is not effective, i.e. there are no changes in the database after its execution (no insertion, update, or deletion has been performed), a marker of an ineffective operation appears in the status - a blue dot in the lower right corner of the cancellation status icon.



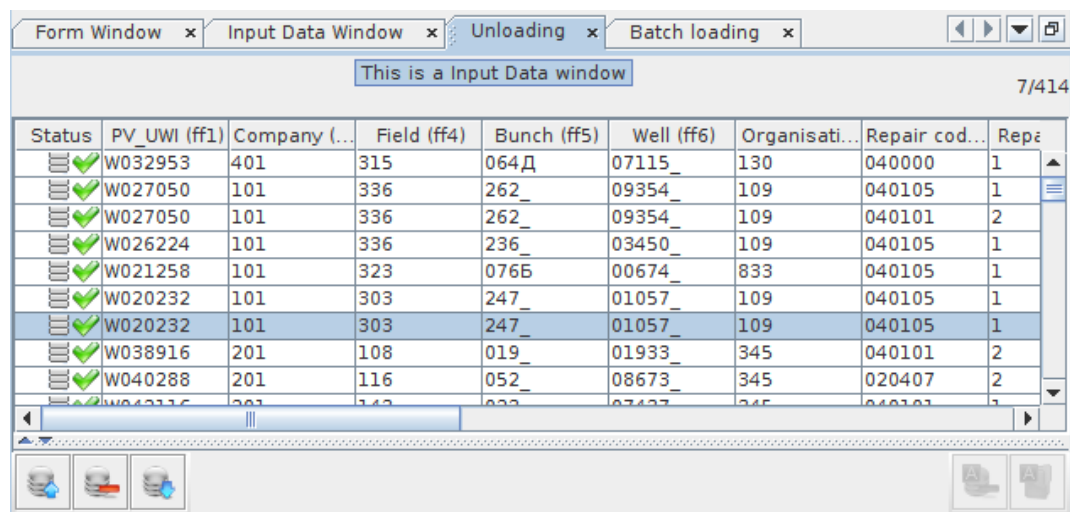
Ineffective data updating

Effective operations do not have an additional marker such as 

These markers can be useful, for example, in cases where duplicates need to be identified after loading. For example, after loading 10,000 rows, only 9,997 were unloaded. Three lines that fall into the difference turned out to be duplicates (that is, they were loaded last month). The loader marked these lines as ineffective.

In a more popular sense, ineffective rows are duplicates (the row has already been loaded), and reconciliation rows are duplicates in which the values of updated fields are entered.

In the “**Unloading**” panel you can see the result of updating the data. Record values have changed.

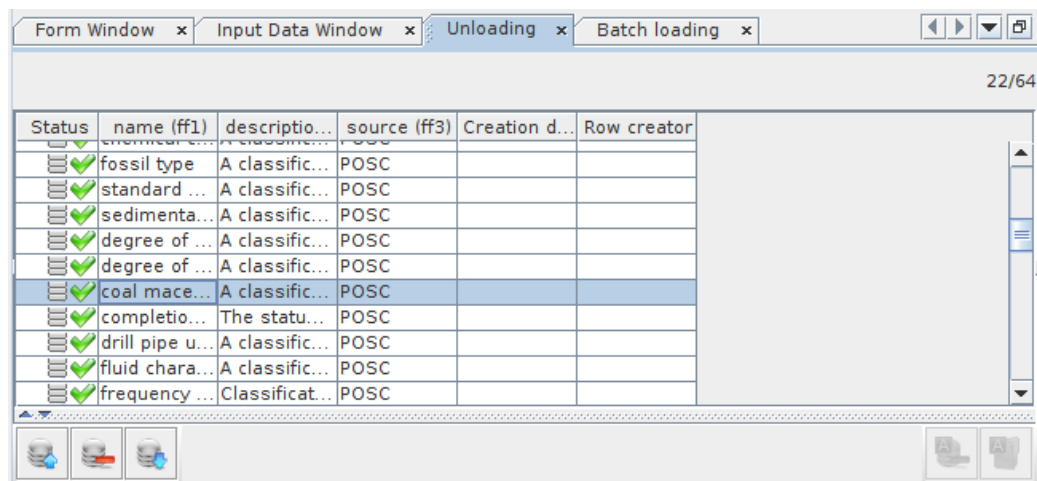


The result of data updating

REMOVING DATA

DELETING DATA IN THE “UNLOADING” PANEL

In order to remove loaded data from the database permanently, you need to unload the material. To facilitate searching and unloading of data, you can use data filtering by a specific criterion. The table counter displays the number of rows unloaded. Select the required number of rows, in any way possible, and apply the ***Delete Selected Records*** button.

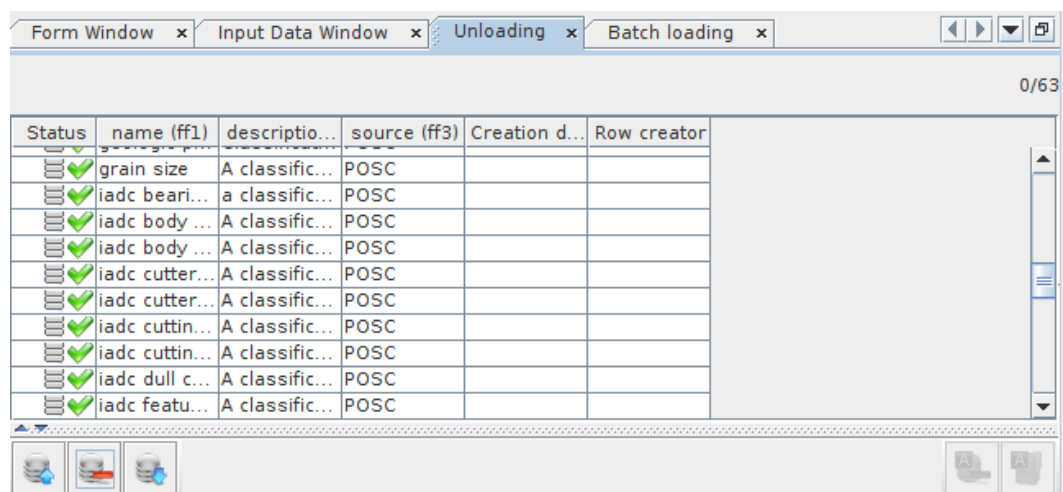


Status	name (ff1)	descriptio...	source (ff3)	Creation d...	Row creator
✓	fossil type	A classific...	POSC		
✓	standard ...	A classific...	POSC		
✓	sedimenta...	A classific...	POSC		
✓	degree of ...	A classific...	POSC		
✓	degree of ...	A classific...	POSC		
✓	coal mace...	A classific...	POSC		
✓	completio...	The statu...	POSC		
✓	drill pipe u...	A classific...	POSC		
✓	fluid chara...	A classific...	POSC		
✓	frequency ...	Classificat...	POSC		

Unloaded material

After applying the ***Delete Selected Records*** button, a window confirming this operation is displayed.

The result of data deletion is shown in the figure. The row was successfully deleted from the database, and the counter indicates one unit less.




Status	name (ff1)	descriptio...	source (ff3)	Creation d...	Row creator
✓	grain size	A classific...	POSC		
✓	iadc beari...	a classific...	POSC		
✓	iadc body ...	A classific...	POSC		
✓	iadc body ...	A classific...	POSC		
✓	iadc cutter...	A classific...	POSC		
✓	iadc cutter...	A classific...	POSC		
✓	iadc cuttin...	A classific...	POSC		
✓	iadc cuttin...	A classific...	POSC		
✓	iadc dull c...	A classific...	POSC		
✓	iadc featu...	A classific...	POSC		

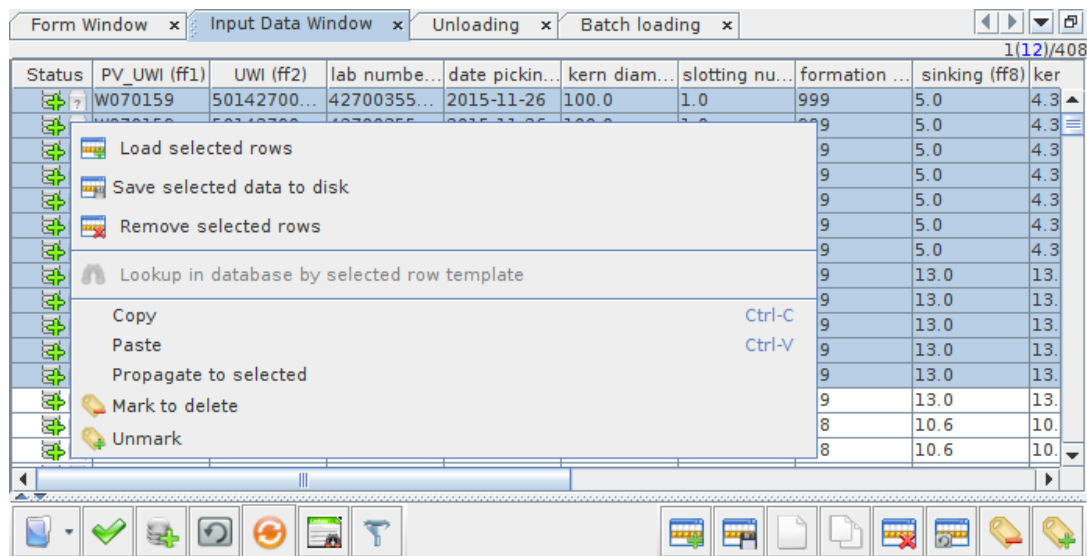
The result of data deletion

DELETING DATA IN THE “INPUT DATA” PANEL


It is a function for datasets that contain non-unloadable projections, allowing you to delete material without unloading it to the “*Unloading*” panel.

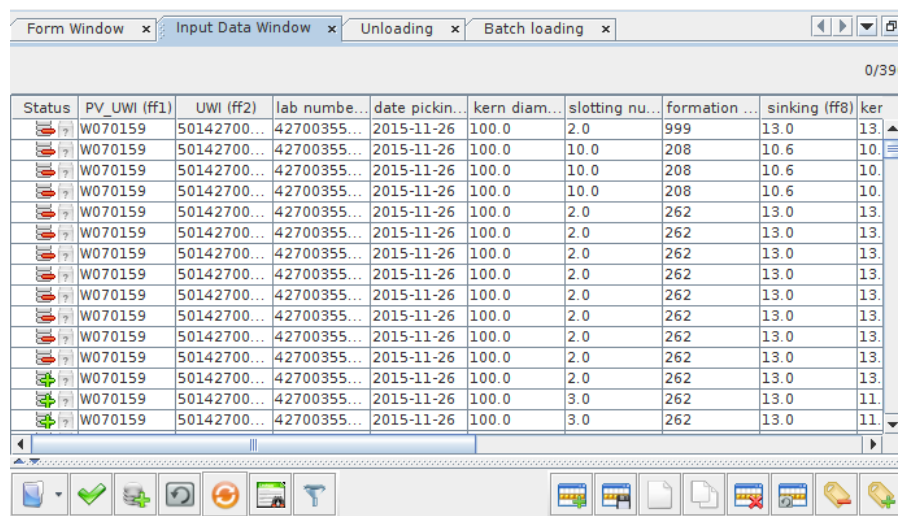
In order to delete the lines loaded earlier, you need to open the input file, select the input rows and select the “*Mark as “Delete”*” item in the drop-down menu (right mouse button).

Otherwise use the  button on the toolbar.





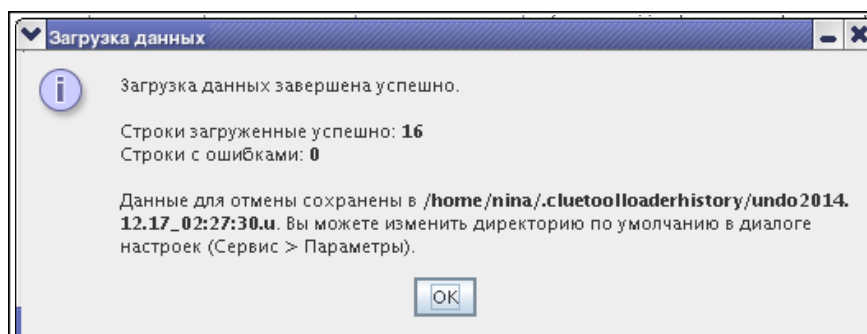
Data deleting function

After that, the rows will be marked with the  - “Delete” status icon and when the loader starts, it will perform the deletion operation for these rows.



Rows prepared for deletion














After the operation is completed, a message is displayed with a detailed description of the result of data loading. In case of successful deletion the row is marked with the  icon, or with the  icon if an error occurred while deleting. Errors, as in other cases, can be viewed by double-clicking on the desired row.



A message with a result of data loading

Form Window x Input Data Window x Unloading x Batch loading x

This is a Form window 0/396

Status	PV_UWI (ff1)	UWI (ff2)	lab numbe...	date pickin...	kern diam...	slotting nu...	formation ...	sinking (ff8)
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	999	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	10.0	208	10.6
	W070159	50142700...	42700355...	2015-11-26	100.0	10.0	208	10.6
	W070159	50142700...	42700355...	2015-11-26	100.0	10.0	208	10.6
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0
	W070159	50142700...	42700355...	2015-11-26	100.0	2.0	262	13.0

The result of data deletion