

FUSIONX – SP4  
MARCH 2023



## SAMPLE STATION

HOW-TO DOCUMENTATION

DATAMINE SOFTWARE

## TABLE OF CONTENTS

Purpose .....	3
Prerequisites for Using the Application .....	3
User Profile Permission .....	3
Database Connection .....	3
Overview .....	4
Layout.....	4
LOG: Surface Samples .....	4
Quick Transfer .....	5
Creating a new Surface Sample.....	6
Location / Coordinates.....	8
Results .....	9
Real Time Results .....	9
Quality Control Samples.....	10
Standards .....	11
Print Tags.....	11
Sample Fractions.....	12
Locked Dispatched Samples .....	13
Formula Recalculation.....	14
LOG: Standalone Tables.....	14
Logging Modular Samples.....	16
IMPORT: Surface Sample Import.....	17
IMPORT: Lab Assays Import .....	21
Fusion Standard file format.....	25
System Preference options .....	25
Standard Validation Rules .....	27
IMPORT: Table Mapping.....	27
EXPORTS.....	31
SAMPLE ANALYSIS: Sample Tag Generator.....	32
SAMPLE ANALYSIS: Sample Dispatch .....	34
Dispatch List .....	34
Company Details .....	35
Creating a New Dispatch.....	35

Dispatching a Sample Dispatch .....	42
Lock Dispatched Samples .....	43
SAMPLE ANALYSIS: Batch Authorization .....	44
DATA TRANSFER .....	51
Synchronization Settings .....	51
Refresh Lists .....	52
Transfer In, Transfer Out.....	53
Standalone Transfer In, Standalone Transfer Out .....	55
External Transfer In, External Transfer Out .....	56
View Logs .....	60
View Current Transfers.....	60
ADMINISTRATION.....	60
Surface Sample Authorization.....	60
Administrator Access .....	61
Restore Local Database .....	62
PREFERENCES .....	63
User Preferences .....	63
System Preferences .....	65
Change Language .....	67
Customize Your Assay Screen .....	67
OTHER OPTIONS.....	68
Printer Setup .....	68
Audit Log .....	68
Projects .....	68
Calculate Common Coordinates.....	70
Help About .....	70
Latest News .....	70
Central Database Utilities.....	71
Reset Sample Results .....	71
Original Business Unit Maintenance .....	71
Metal Prices.....	71
Invoices .....	71

## PURPOSE

Sample Station is a powerful application that is designed to collect, store, analyze and report all field sampling data collected in exploration projects. It can be run in a standalone configuration, but its data management capabilities are enhanced by running it in a client-server configuration bundled with our Fusion Central and Fusion Remote databases.

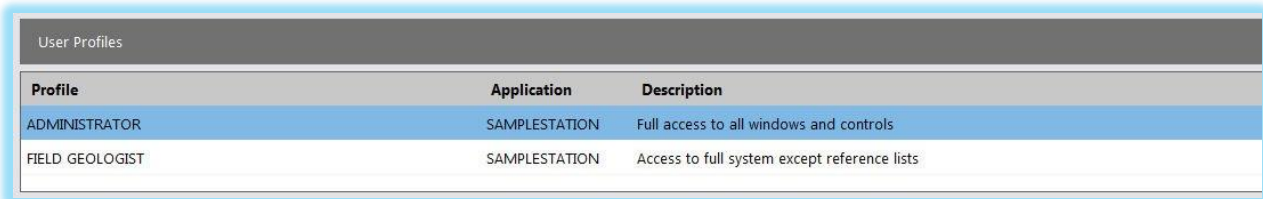
This document outlines the features of Sample Station and how to get started using them.

## PREREQUISITES FOR USING THE APPLICATION

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### USER PROFILE PERMISSION

Accessing the Sample Station application can be done with any configured user. However, user profiles ensure access to modules is limited to qualified personnel. Typically, users are assigned either Administrator or Field Geologist user profile. These can be assigned in the User Administrator window within Fusion Administrator.



Profile	Application	Description
ADMINISTRATOR	SAMPLESTATION	Full access to all windows and controls
FIELD GEOLOGIST	SAMPLESTATION	Access to full system except reference lists

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### DATABASE CONNECTION

Sample Station is primarily used against the Local database, but there are some features that can be accessed when connected to the Fusion Remote or Central databases. In some organizations, where Central and Fusion Remote databases are not used, the connection will be made against a Standalone database.

## OVERVIEW

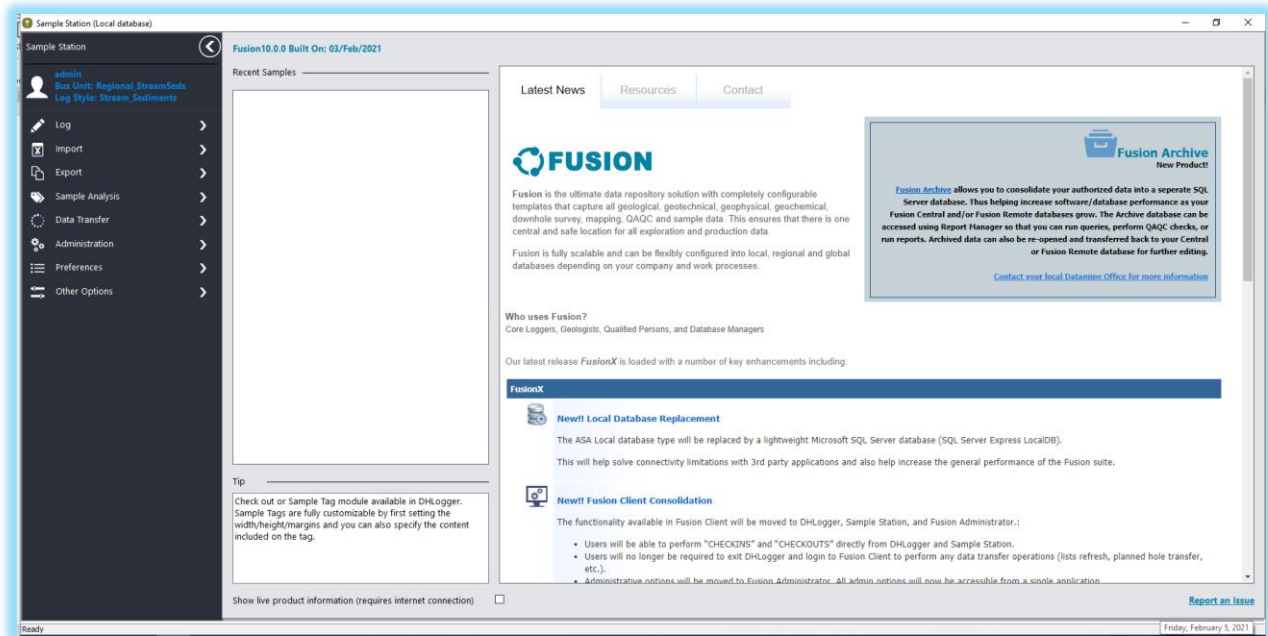
### LAYOUT

The most frequently accessed modules have been categorized and can be accessed from the collapsible **Menu Bar** located on the left side of the main window. Sample Station consists of seven main groupings, with the remaining utilities and activities placed under *Other Options*.

Sample Station will open to the “Latest News” window, which contains information about the Fusion solution from Datamine, as well as Resources and Contact information.

The list of Recent Samples can be used to navigate directly to one of the last 15 samples that have been modified.

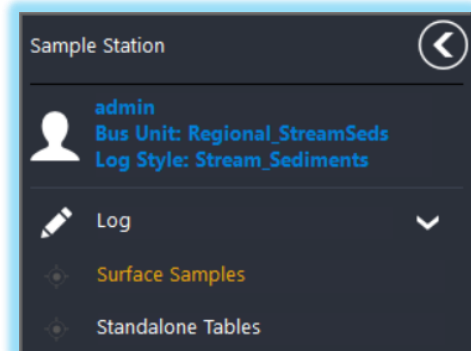
A Tip section shows information that may help you with your logging workflow.

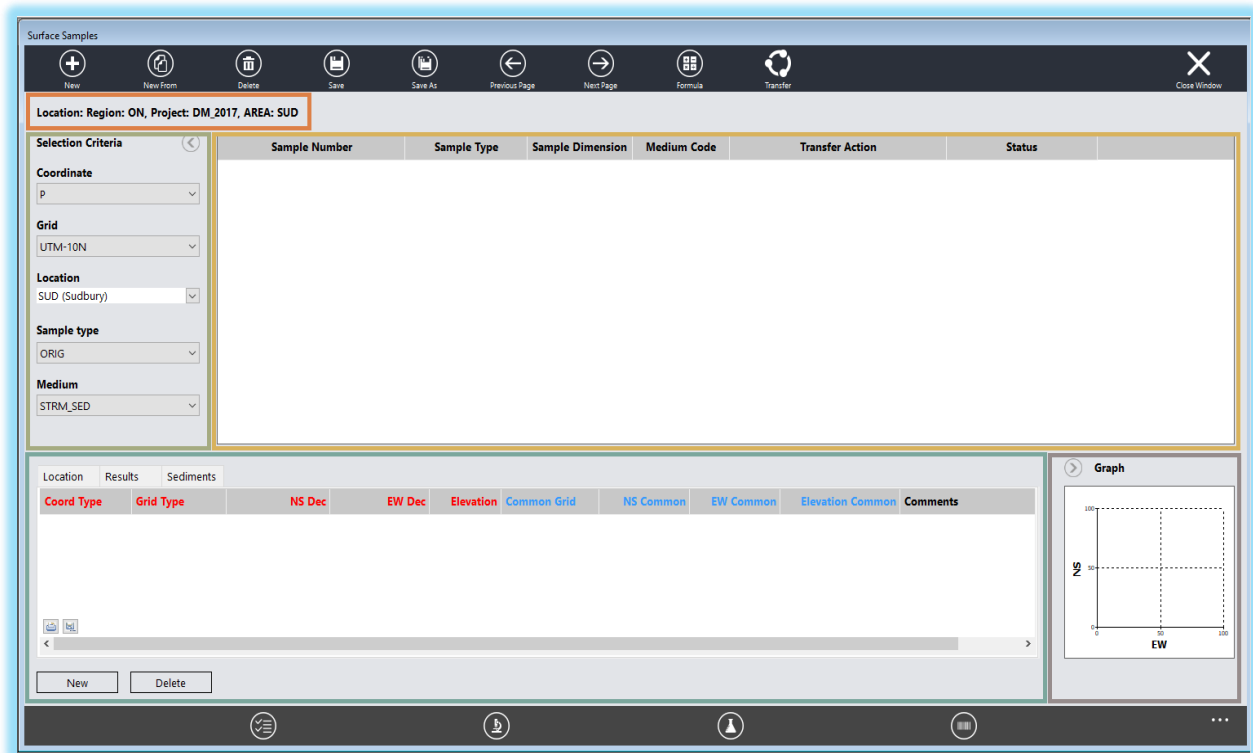


### LOG: SURFACE SAMPLES

This is the main module used for sample data entry, viewing sample data, and creating standards and QC samples.

Open the Surface Samples window by clicking the **Log > Surface Samples** menu.





## QUICK TRANSFER

With the consolidation of functions previously found in Fusion Client, the ability to do a quick check in or check out of a surface sample is available from the Surface Samples window by pressing the **Fusion Transfer** icon. The transfer is attempted, with the action determined based on the current status of the surface sample in the Local database, and it uses the Default DSN that is set in the *Data Transfer > Synchronization Settings*. The sample becomes temporarily locked for editing until the transfer action is complete, and if successful the sample will unlock and the status of the surface sample will change to CHECKEDOUT or COPY, depending on the action. At the completion of the transfer, a notification will appear at the bottom right of the screen.



### Location

- Displays the complete hierarchical Location information as specified by the Location picklist in the Selection Criteria

### Selection Criteria

- Used to filter the samples that will be displayed in the Surface Samples window
  - Coordinate Type, Grid:** used to define the coordinates displayed in the Graph
  - Location:** select from the Location Selection window
  - Sample Type, Medium Type:** from picklists, filters the samples to display; also impacts the columns that will display in the Surface Samples window and the tabs that will display in the Surface Sample tabs

### Surface Samples window

- Non-editable window, showing the surface samples that match the selection criteria (Location, Sample Type, Medium Type)
- Click to select a sample, which will retrieve data into the Surface Sample tabs
- Double-click to edit, opening the Sample Maintenance window

### Surface Sample tabs

- Displays 3 standard (built-in) tabs: Location, Results, Real Time Results
- Displays any custom tabs that are associated with the Logging Style (if configured, otherwise it shows all)

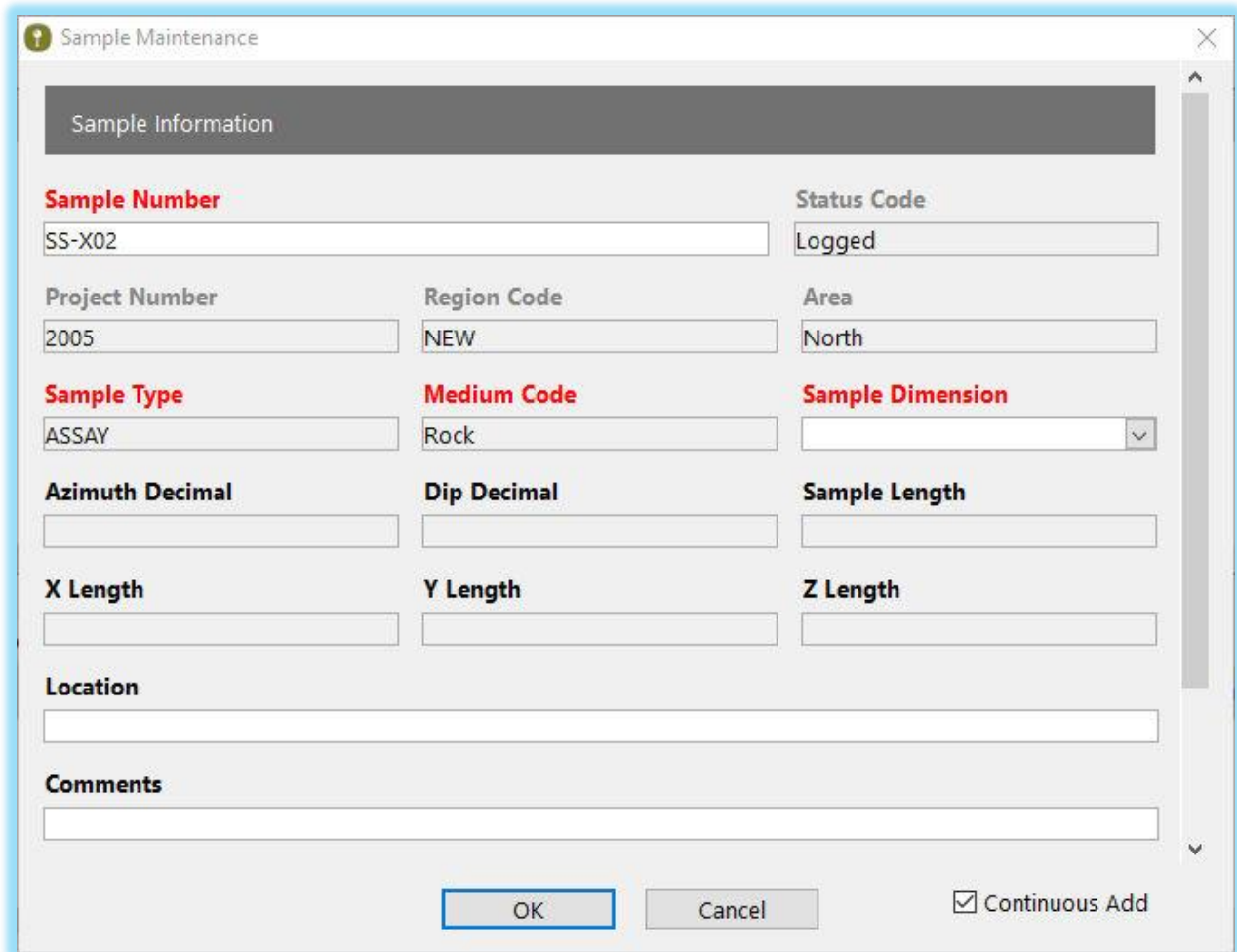
### Location Graph

- A graph plotting the coordinates of the samples listed in the Surface Samples window
- Coordinates are pulled from records matching the Coord Type / Grid chosen in the Selection Criteria

## CREATING A NEW SURFACE SAMPLE



Once all fields are populated in the Selection Criteria, click the New toolbar button to create a new surface sample in the Sample Maintenance window that opens.



**Sample Maintenance**

**Sample Information**

**Sample Number** SS-X02 **Status Code** Logged

**Project Number** 2005 **Region Code** NEW **Area** North

**Sample Type** ASSAY **Medium Code** Rock **Sample Dimension** [dropdown]

**Azimuth Decimal** [text] **Dip Decimal** [text] **Sample Length** [text]

**X Length** [text] **Y Length** [text] **Z Length** [text]

**Location** [text]

**Comments** [text]

OK Cancel  Continuous Add

- Seen in the image above, the convention in Sample Station will denote required fields with a red label, non-editable fields with a grey label, and (not shown) calculated columns with a grey label and light blue field.
- Sample Number field supports letters, numbers, space, and special characters except the following:
  - Single quote '
  - Double quote "
  - Comma ,
  - Semicolon ;
  - Tilde ~
  - At @
  - Pound #
- The location information fields are populated from the selection criteria; this section is dynamic depending on the levels(headers) that are added to the Location Codes tree in Fusion Administrator.
- **Sample Dimension** is required and will be one of a static list of types: **Line, Point, Volume**.
- Depending on the Sample Dimension, some of the following fields will become enabled:
  - Azimuth Decimal, Dip Decimal:** orientation of a *line sample* in the horizontal and vertical planes

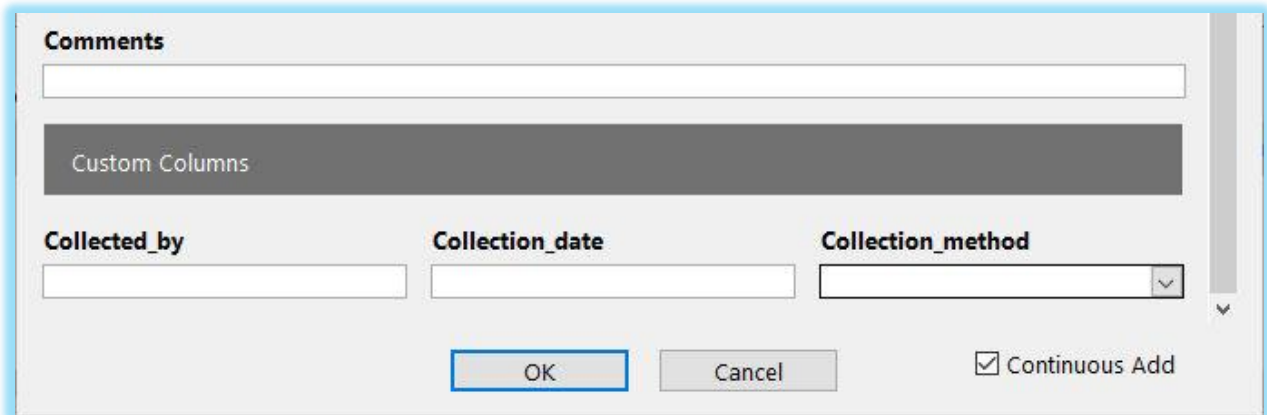


**Sample Length:** the linear extent of a *line sample*

**X Length, Y Length, Z Length:** the width, length and height of a *volume sample*

- **Location** is an editable field allowing a more precise indication of where the sample was found
- **Comments** allows for the entry of any additional information about the sample

Below the Comments field, if any custom columns have been defined, they will be found in a separate section labelled “Custom Columns”.

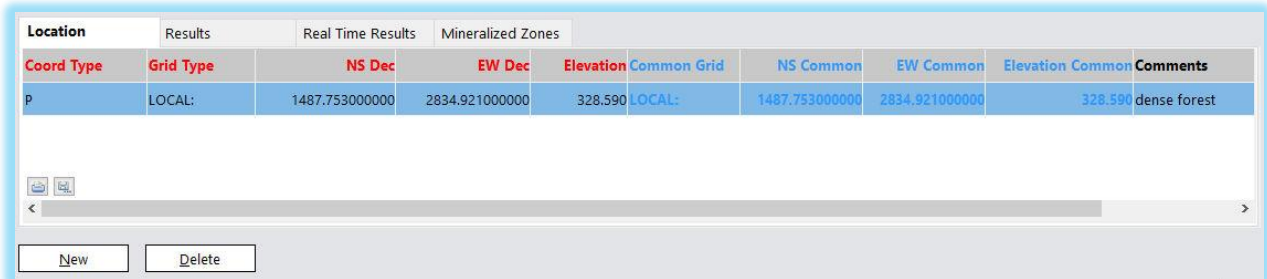


The screenshot shows a form with the following elements:

- Comments:** A large text input field at the top.
- Custom Columns:** A greyed-out section below the comments field.
- Collected\_by:** A text input field.
- Collection\_date:** A text input field.
- Collection\_method:** A dropdown menu.
- Buttons:** "OK" and "Cancel" buttons at the bottom.
- Continuous Add:** A checkbox labeled "Continuous Add" with a checkmark.

## LOCATION / COORDINATES

This tab is used to enter the coordinates of the surface sample.



Coord Type	Grid Type	NS Dec	EW Dec	Elevation	Common Grid	NS Common	EW Common	Elevation Common	Comments
p	LOCAL:	1487.753000000	2834.921000000	328.590	LOCAL:	1487.753000000	2834.921000000	328.590	dense forest

Below the table are "New" and "Delete" buttons.

### Location tab

- **Coord Type:** from the Coordinate Type picklist, used to define the record (examples include Primary, Alternate, Estimate)
- **Grid Type:** from the Grid Type picklist, the grid or coordinate system used for the supplied coordinates.  
If a default grid for the project is specified, this field will be auto-populated when a new record is created, but it can be changed.
- **NS Dec:** the location northing in decimal format (may be Cartesian or Lat/Long, depending on the Grid Type)
- **EW Dec:** the location easting in decimal format (may be Cartesian or Lat/Long, depending on the Grid Type)
- **Elevation:** the location elevation in decimal format
- **Common Grid, NS Common, EW Common, Elevation Common:** the coordinates converted to the common grid that is set in the System Preferences
- **Comments:** additional information can be added here

## RESULTS

This tab stores the analytical results for the surface sample.

Location	Results	Real Time Results	Mineralized Zones		
Sample Number	Status Code	Ag Gpt Lab	Au Gpt Lab	Cu Per Lab	Sg Gcm3 Calc
SS-X02	Logged	238.1500	3.5900	2.5000	

New Delete

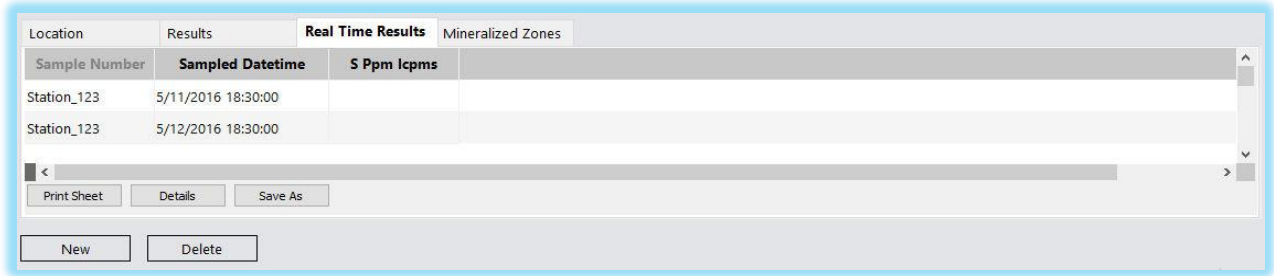
### Results tab

- There will only ever be one row in this table, which cannot be deleted.
- Most often, none of the fields will be editable, as the Sample Number and Status Code are being populated from the selected sample, and the results are non-editable fields that will have data entered through Lab Import.
- The columns displayed in this window are dependent on the Business Unit / Sample Type / Medium Type associations configured in Fusion Administrator.

## REAL TIME RESULTS

This tab stores the analytical results for samples that are recorded at specific intervals. For example, a station (surface sample) is created that records water or air samples on a daily basis. Each daily sample

is added with the New button (under the tabs) to record the date/time, and results can be returned and imported.



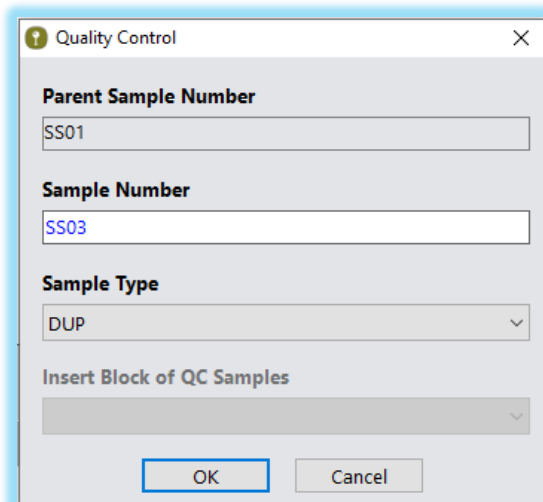
### Real Time Results tab

- Used for recording time-interval sampling
- The columns displayed in this window are dependent on the Business Unit / Sample Type / Medium Type associations configured in Fusion Administrator.

## QUALITY CONTROL SAMPLES

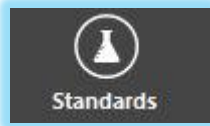


Select a sample from which the quality control sample will be created, then click the Quality Controls button. The Quality Controls window will open where, after providing a sample number and sample type, the sample will be generated. QC Samples are used to test the accuracy of the laboratory by creating a duplicate of an existing sample, and then comparing the returned results.

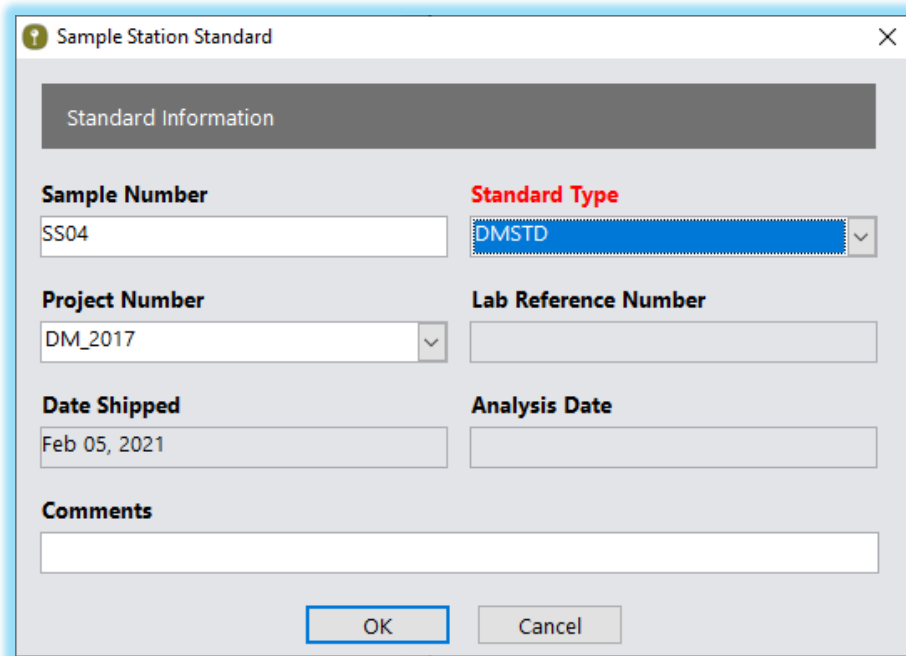


Alternatively, instead of selecting a single sample type, you can choose to select a block of QC Samples, allowing for multiple QC Samples to be created at one time from the single parent sample. The configuration required to allow the block insertion is performed in the QC Packages module in Fusion Administrator.

## STANDARDS



Clicking the Standards button will open the Sample Station Standards window, from which you can view and create new standard samples. Standards are used to test the accuracy of laboratories by submitting samples that have known results.

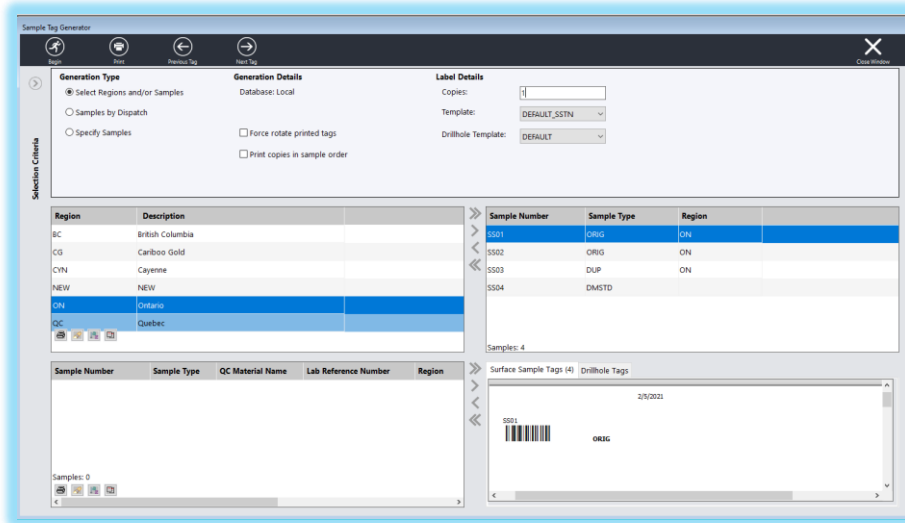


## PRINT TAGS



The Print Tags button opens the Sample Tag Generator window, where you can select samples for which to print labels or generate labels for samples that do not yet exist in the database.

See the **Error! Reference source not found.** module for a complete description of functionality.



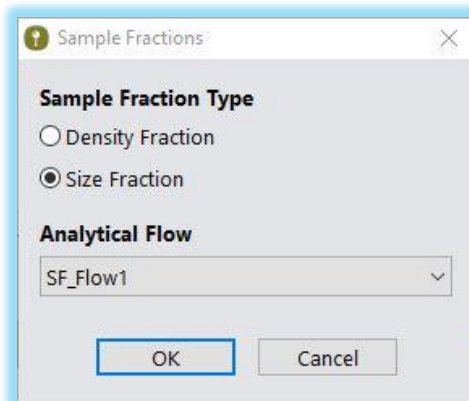
## SAMPLE FRACTIONS



Click the Sample Fractions button to open the Sample Fractions window. From this window, select whether you are creating Size Fractions or Density Fractions (if both are enabled), and pick the Analytical Flow to create the sub-samples.

Size Fractions are sub-samples, where the original sample may pass through sieves to group particles into similar size, and then these sub-groups are analyzed individually.

Density Fractions are sub-samples, where the original sample may be subjected to float/sink testing in liquids with known densities in order to separate the sample into sub-groups of material, which will be analyzed individually.



This image shows the generated Size Fractions in the Surface Samples window, where the original (parent) sample has the arrow, which can be used to show or hide the sub-samples.

SF	DF	Sample Number	Sample Type	Sample Dimension	Medium Code	Analytical Flow	Prep Package	Screen Size	Collected By	Collection Date
		SS-X02	ASSAY	Point	Rock					
		SS-X04	ASSAY	Point	Rock	SF_Flow1				
		SS-X04-01	ASSAY	Point	Rock	SF_Flow1	DryPrep	+8.0mm		
		SS-X04-02	ASSAY	Point	Rock	SF_Flow1	DryPrep	+1.0-8.0mm		
		SS-X04-03	ASSAY	Point	Rock	SF_Flow1	DryPrep	-1.0mm		

### LOCKED DISPATCHED SAMPLES

With the “Lock Samples in Data Tables after they are dispatched” preference enabled, there are some changes to the sample logging in Sample Station. Once a sample (or Standard) has been identified as being dispatched, it will be locked.

Sample Number	Sample Type	Sample Dimension	Medium Code	Status
SS01	ASSAY	Point	Rock	NEW
SS02	ASSAY	Point	Rock	NEW
SS03	ASSAY	Point	Rock	NEW
SS04	ASSAY	Point	Rock	NEW
SS05	ASSAY	Point	Rock	NEW
SS06	ASSAY	Point	Rock	NEW
SS07	ASSAY	Point	Rock	NEW
SS08	ASSAY	Point	Rock	NEW
SS09	ASSAY	Point	Rock	NEW
SS10	ASSAY	Point	Rock	NEW

A locked Surface Sample will have the following:

- A lock icon beside it in the list
- A lock icon in the Header band in the window that opens when you double-click to edit a Surface Sample
- Sample Number field is not editable

A locked Standard will have the following:

- A lock icon beside it in the list
- A lock icon in the Header band in the window that opens when you double-click to edit a standard
- Sample Number field is not editable

As a user without QUALIFIED PERSON profile:

- Sample Number field is not editable
- Standards cannot be deleted
- Surface Samples can only be deleted if they are not the master version (ie. is a copy)

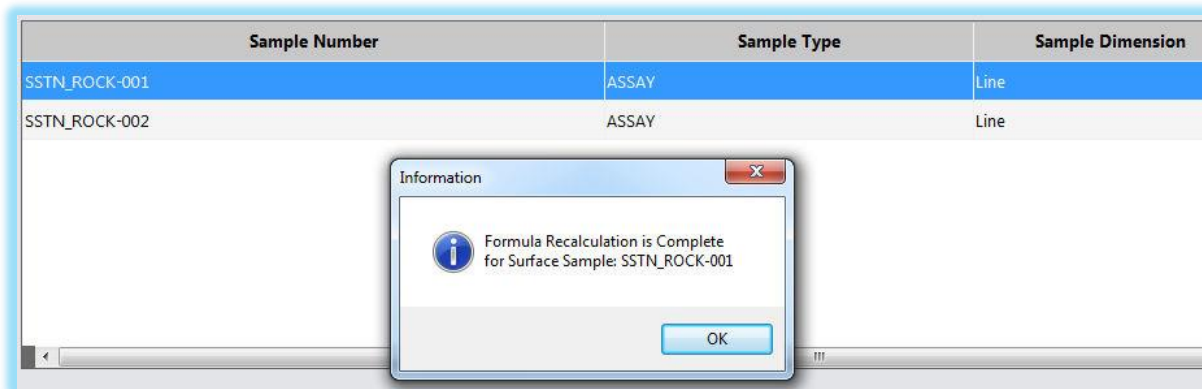
As a user with QUALIFIED PERSON profile:

- Locked samples can be unlocked by opening the object with a double-click and then clicking on the Lock icon in the Header Band
- When a sample is unlocked:
  - The lock icon changes to 'open'
  - Sample Number field becomes editable
- If an unlocked sample is locked again, the changes are discarded and re-set to values prior to unlocking
- If an unlocked sample is saved, the old and new values are stored in the DHL\_AUDIT\_LOGGING table

## FORMULA RECALCULATION



From the main toolbar menu, when the Surface Sample window is open, custom formulas can be recalculated by selecting a sample and then using the Formula toolbar item

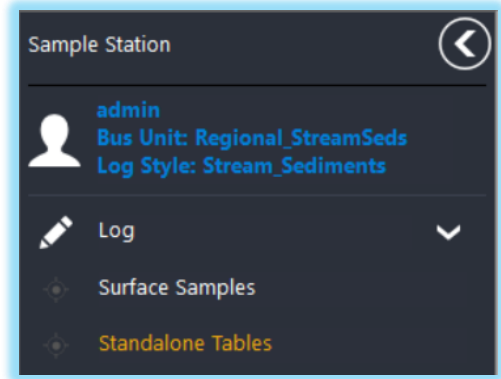



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## LOG: STANDALONE TABLES

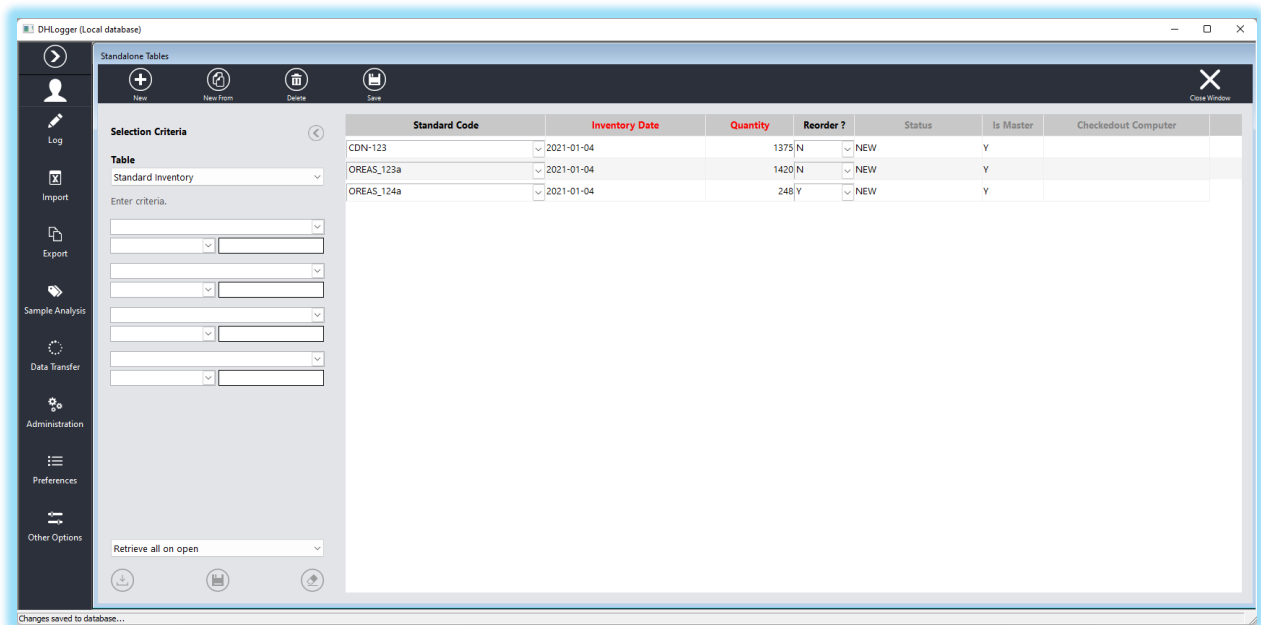
The Standalone Tables module is available to users for data entry into tables that are not related to Drill Holes or Surface Samples -- these are "Standalone" tables.

The Standalone Tables module can be opened from the **Log > Standalone Tables** menu.



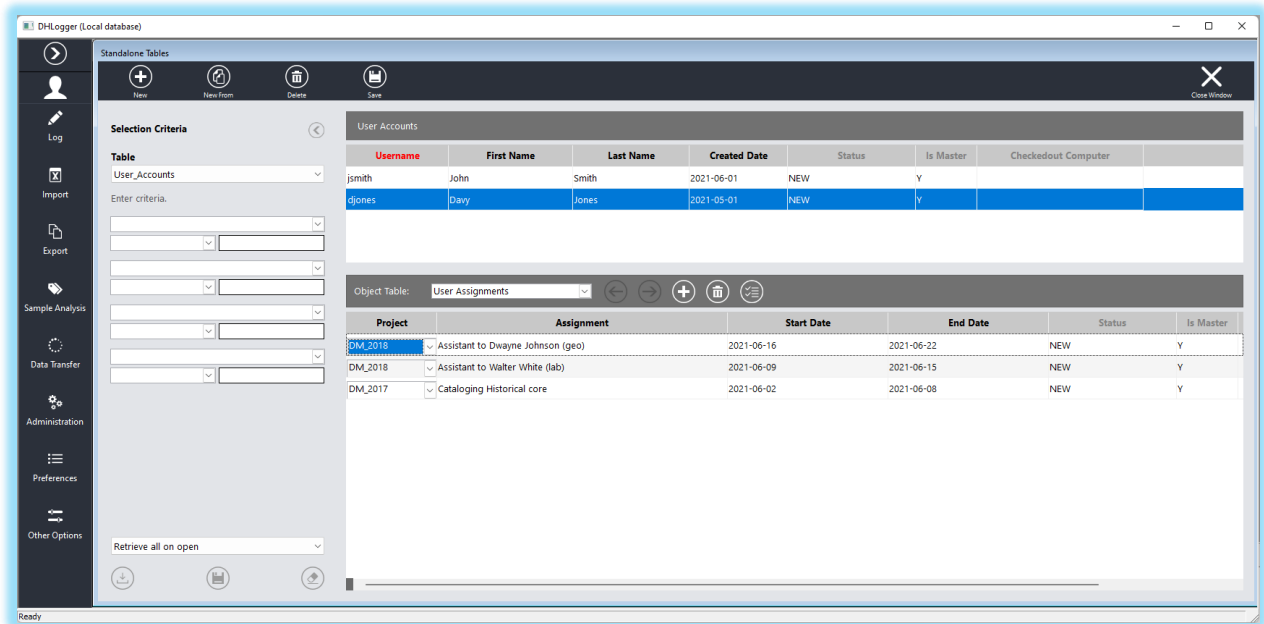
The Selection Criteria section is used to select the Table or Group and specify filters, if necessary, on the data being retrieved.

Only the tables that are assigned to the users logging style will be available for selection.



*Standalone Tables window – Table selected*





Standalone Tables window – Group selected

Data is entered, edited and deleted in the window directly, using the New, New From, Delete and Save buttons. The behaviour of the copying of child data (Always, Never, Prompt) can be configured in the User Preferences window.

**NOTE:** when a parent row is copied the unique column(s) will need to be edited before a save can be completed. Samples will not be copied to the new row as they must be unique in the database.

When a Group has been selected, the top window displays the Parent table, and the bottom window displays the Child tables.

The Object Table picklist displays the child tables assigned in the Group, and only those tables that have been assigned to the user's Logging Style.

There are buttons for navigating tables (also use ALT + P, ALT + N) which may be disabled if only one child table exists, adding data (also use CTRL + SHIFT + N), deleting data (CTRL + SHIFT + D), and multiple row selection with checkboxes.

### LOGGING MODULAR SAMPLES

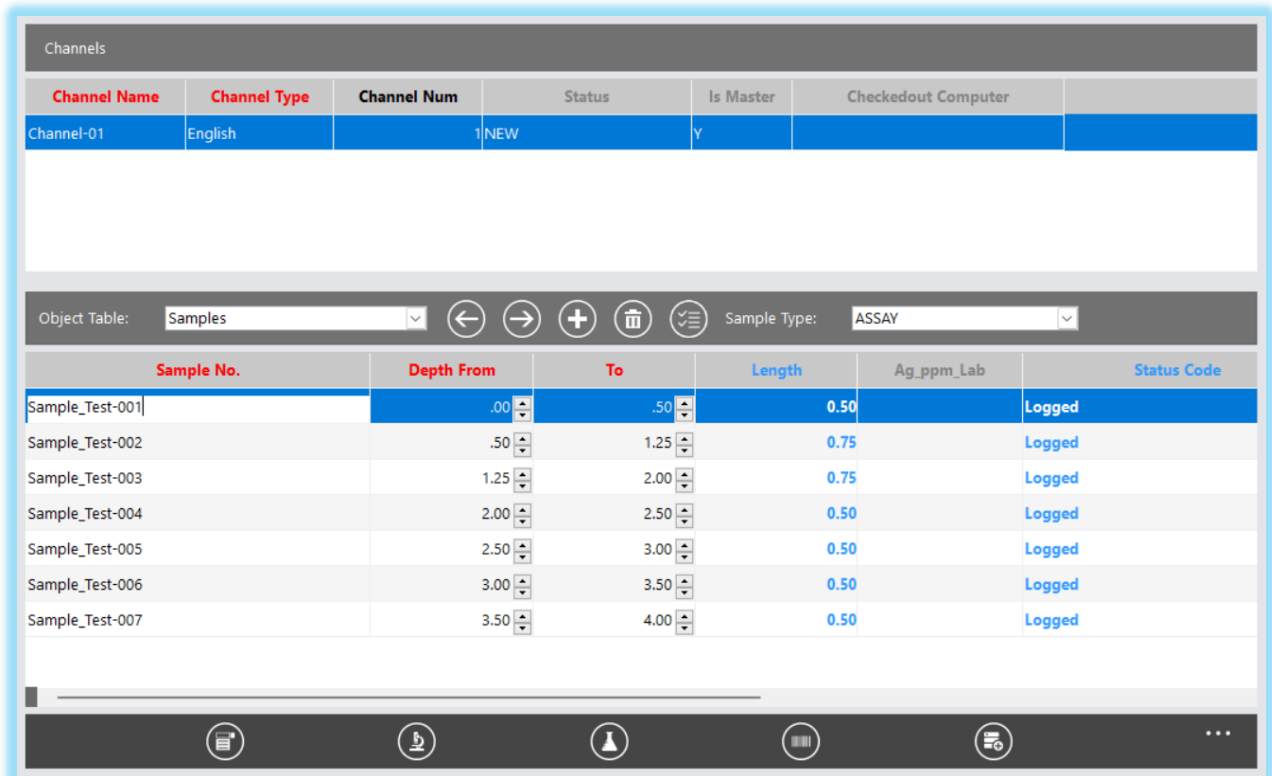
Samples can be logged against parent row if modular\_samples table has been assigned to that group. You can log modular samples by selecting parent row and "Samples" option from the "Object Table" picklist. The **Sample Number** field supports letters, numbers, space, and special characters except the following:

- Single quote '
- Double quote "
- Comma ,
- Semicolon ;

- Tilde ~
- At @
- Pound #

You can also choose from a list of **Sample Type** codes that have been assigned to the active logging style. Depths for the samples can be visible or hidden depending upon the configuration set for the Modular Samples table for the group.

This module also allows you to generate samples, log QC Samples, add modular standards, print sample tags, and add samples to a dispatch. These options are available on the toolbar displayed at the bottom of this window.



Channel Name	Channel Type	Channel Num	Status	Is Master	Checkedout Computer
Channel-01	English	1NEW		Y	

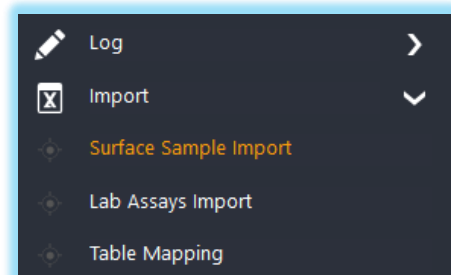
Sample No.	Depth From	To	Length	Ag_ppm_Lab	Status Code
Sample_Test-001	.00	.50	0.50		Logged
Sample_Test-002	.50	1.25	0.75		Logged
Sample_Test-003	1.25	2.00	0.75		Logged
Sample_Test-004	2.00	2.50	0.50		Logged
Sample_Test-005	2.50	3.00	0.50		Logged
Sample_Test-006	3.00	3.50	0.50		Logged
Sample_Test-007	3.50	4.00	0.50		Logged

Standalone Tables window – Modular Samples selected

## IMPORT: SURFACE SAMPLE IMPORT

The surface sample import utility is used to import data in a comma- or tab-delimited format into various Sample Station data tables.

Open the Surface Sample Import by clicking the **Import > Surface Sample Import** menu.





To create a new import, use the New button and enter an Import Name in the window that opens.



To remove an import, use the Delete button while you have the import selected in the dropdown.



Once an import is defined and columns are mapped, the data can be imported. Using the Run button will execute the currently selected tab of the import.



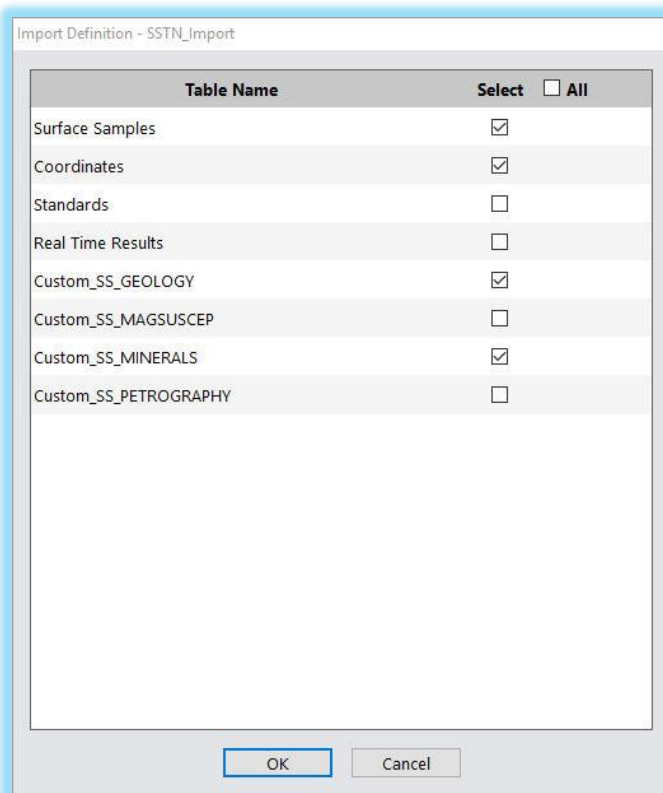
Once an import is defined and columns are mapped, the data can be imported. Using the Run All button will execute each of the tabs in the import, starting with the first, providing they have the "Include" checkbox enabled.



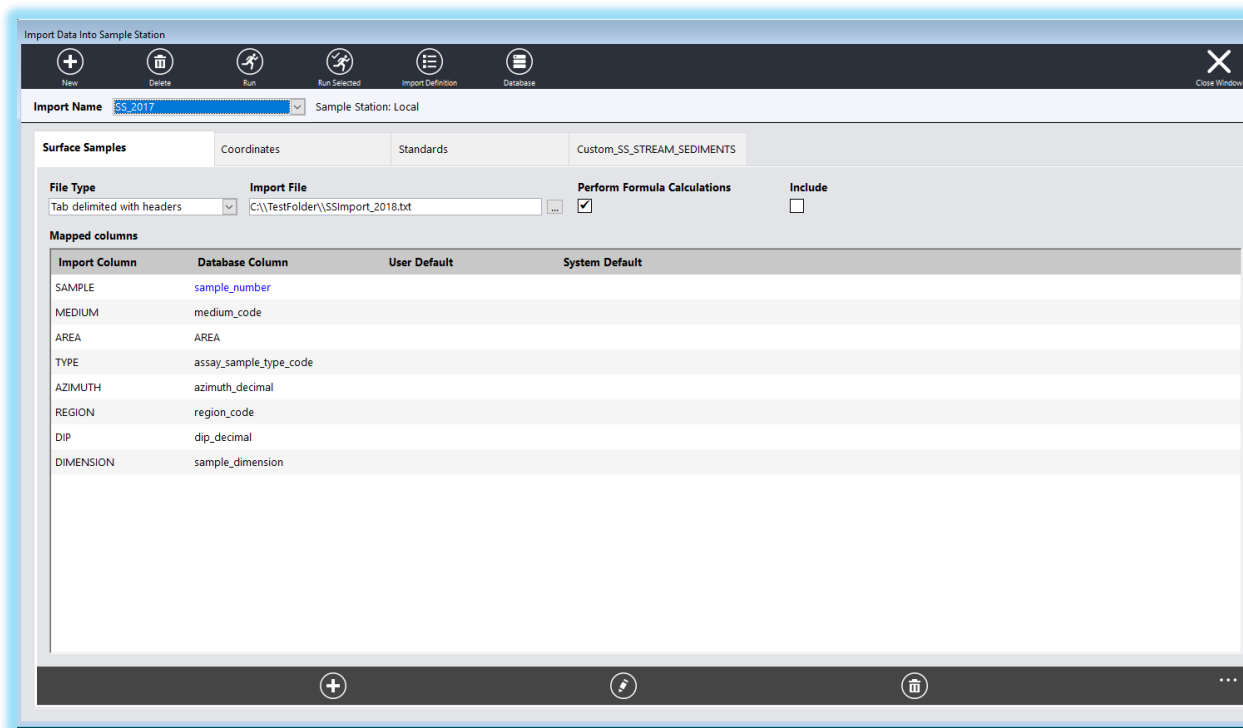
If an import schema needs to be modified, for example to add another table, click the Definition button to open the Import Definition window for editing.



Data is usually imported into the Local database, which is the default location. However, data can also be imported directly to the Central or Fusion Remote databases. To change the destination, click the Database button.



*Import Definition window that allows for the selection of tables*



Import module window with completed mappings

### Import module window

- **Import Name:** selected from picklist, or populated with newly created import name.
- On each tab:
  - **File Type:** the type of file being imported. It must be chosen from the picklist. The 6 available types are:
    - Tab Delimited (with or without headers)
    - Comma Delimited (with or without headers)
    - MS Access. Specifying this file type will also require a source table to be chosen
    - Datamine File (.dm)
  - **Import File:** the path and file name of the import file. It can be typed directly or selected with the Browse button (ellipsis). Only files with the same extension specified under File Type will be displayed.
  - **Perform Formula Calculations:** checkbox to identify if all columns with formulas will be calculated after data is imported to the table
  - **Include:** checkbox to identify if this individual import should be executed if "Run All" is clicked.
  - **Mapped Columns:** a list of the column mappings for the import.



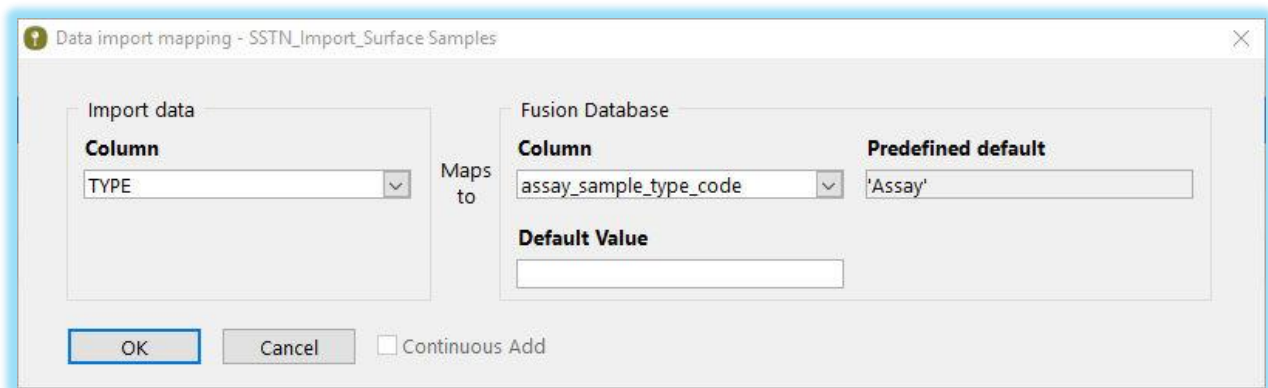
Some mappings will be added based on the selected tab. Required columns will appear in blue and must have a mapping or default defined. To add a new column mapping to an import tab, simply click the Add Column button to open the Data Import Mapping window.



To change a mapping, click the Edit button, or double-click on the row in the Mapped Columns list, to open the Data Import Mapping window.



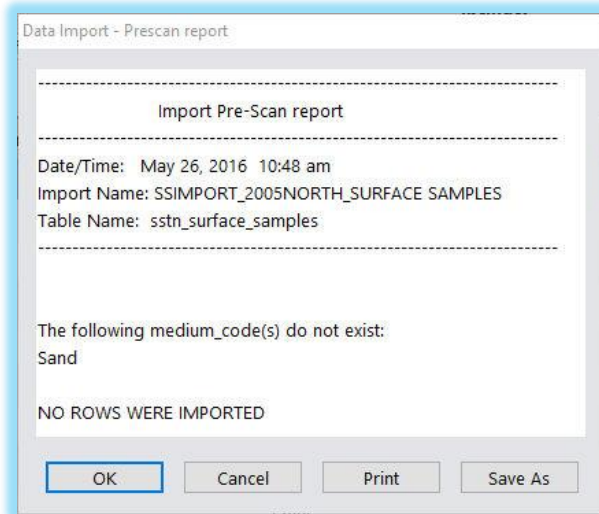
To remove a column mapping from an import tab, simply select the row in the Mapped Columns list and then click the Delete Column button.



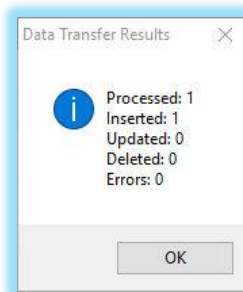
### Data import mapping

- **Import Data - Column:** picklist of columns (by header name or column number) from the source file
- **Fusion Database - Column:** picklist of column names from the Fusion Database destination table
- **Predefined default:** column's database default, if it exists will be displayed
- **Default Value:** supply a default value, if desired, to be used if the value is null in any rows

When running an import, before data is saved to the database, it must pass certain validations. If mapping to a column that is linked to a reference table, the value being imported must exist in that reference table. A Pre-Scan Report will be produced that will identify problems with the data being imported.



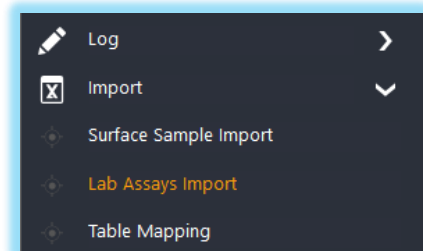
However, if the pre-scan does not find any problems, the data will be imported and when complete, a small report of rows processed, inserted, updated, etc. will be displayed.



## IMPORT: LAB ASSAYS IMPORT

This lab import module is used to validate and import the analytical results returned from the laboratory.

Open the Lab Import by clicking the **Import > Lab Assays Import** menu.

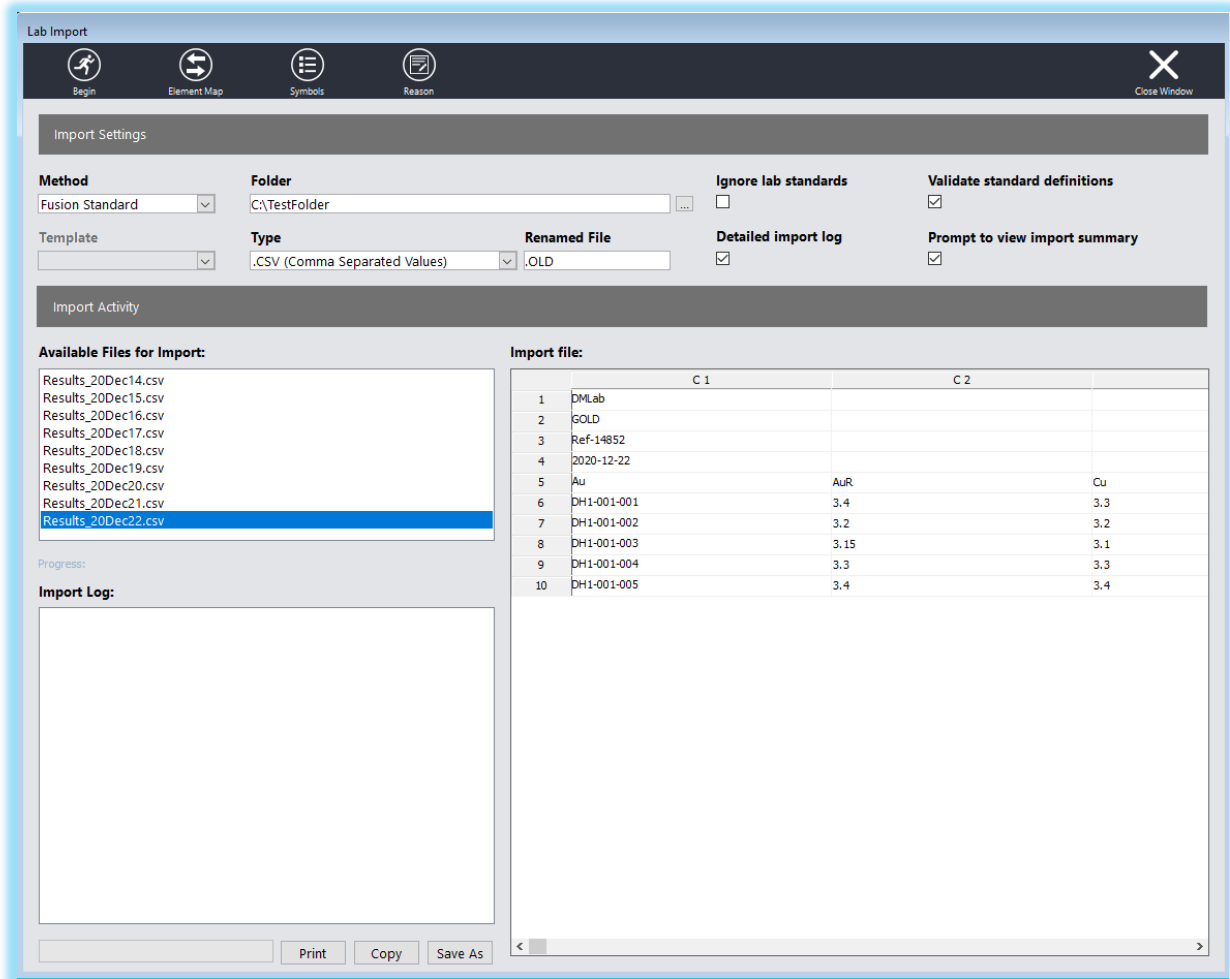


Using this module will require pre-configuration in Fusion Administration:

- Laboratories
- Lab Packages
- Lab Package Details
- Standards, Standard Validation Rules
- Custom Lab Import Templates, if not using the Fusion Standard format.

There are also several System Preferences which apply to the Lab Import, controlling various actions:

- Preview Sample Type
- Check Dispatch
- Update Sample Dispatch Copies
- Warn / Stop Import if Analysis Date > Import Date



The screenshot shows the 'Lab Import' window with the following sections:

- Import Settings:**
  - Method: Fusion Standard
  - Folder: C:\TestFolder
  - Ignore lab standards:
  - Validate standard definitions:
  - Template: (empty)
  - Type: .CSV (Comma Separated Values)
  - Renamed File: .OLD
  - Detailed import log:
  - Prompt to view import summary:
- Import Activity:**
  - Available Files for Import:**
    - Results\_20Dec14.csv
    - Results\_20Dec15.csv
    - Results\_20Dec16.csv
    - Results\_20Dec17.csv
    - Results\_20Dec18.csv
    - Results\_20Dec19.csv
    - Results\_20Dec20.csv
    - Results\_20Dec21.csv
    - Results\_20Dec22.csv (selected)
  - Import file:**

	C 1	C 2	
1	DMLab		
2	GOLD		
3	Ref-14852		
4	2020-12-22		
5	Au	AuR	Cu
6	DH1-001-001	3.4	3.3
7	DH1-001-002	3.2	3.2
8	DH1-001-003	3.15	3.1
9	DH1-001-004	3.3	3.3
10	DH1-001-005	3.4	3.4
- Import Log:** (Empty text area)

### Import Settings

- **Method:** Fusion Standard / User Defined. Indicates the format of the file that will be followed.
- **Template:** picklist of custom lab import templates, enabled only when **Method** is User Defined. After a template is selected, an arrow will appear to allow for a preview of the template definition.
- **Folder:** Use the browse button (ellipsis) to open the folder that is holding the import file(s). The location that was chosen last will be the starting point when the browse button is clicked.
- **Type:** CSV / TXT. Only files of the selected type will be available for import.
- **Renamed File:** specifies an extension to rename the successfully imported files. Set to the same as the selected type if you don't want to rename the file.
- **Ignore lab standards:** when enabled, lab standards will not be imported
- **Validate standard definitions:** when enabled, each standard type that is in the import file will be checked for a definition default result for each lab package detail
- **Detailed import log:** when enabled, a detailed summary of the file import will be displayed in the Import Log pane, uncheck to only display the list of holes that were imported to
- **Prompt to view import summary:** when enabled, following an import that has had standards imported, a prompt will appear to view the summary, and will then open the Batch Authorization window.

### Import Activity

- **Available Files for Import**
  - displays a list of files matching the **Type** selected, that exist in the **Folder** that was chosen
  - select one or more files to import
- **Progress:** displays the progress (which file is being imported)
- **Import Log:** displays the operations that were performed during the Lab Import, including prompts and responses
- **Print, Copy, Save As:** buttons to allow users to print the import log, copy it to the clipboard, or save the log as a TXT file.
- **Import File:** displays the contents of the selected import file (first selected)





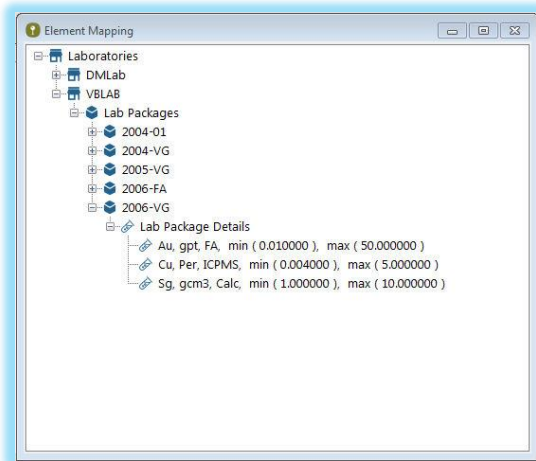
Once the import file (or files) has been selected, click the Begin button to start the import process.



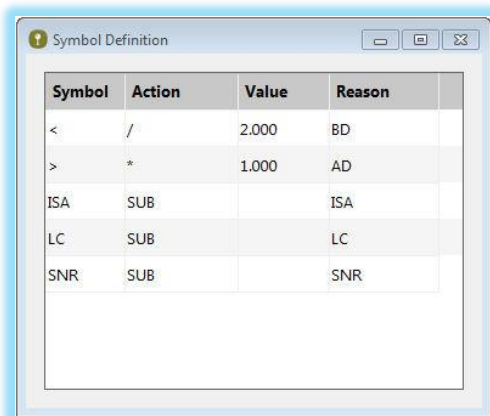
This is an informational window, to view the Laboratories, Packages and Lab Package Details. The element mappings and lab information can only be changed in Fusion Administrator.



To create a definition for any unknown characters found in an import file, click the Symbols button to open the editor. This allows for an action (mathematical operation or substitution) to be defined for when the symbol is found during the Import.



*Element mapping window to view the Lab, Package, Details*



*Symbol Definition window to define actions to be taken when these symbols are found*

**NOTE:** The ability to Add, Edit or Delete from the Symbol Definitions can be restricted by a System Preference (or Business Unit Preference). Applying the restriction will prevent users from performing edits in Fusion Remote and Local databases, however it does not impact the Central or a Standalone database.

### FUSION STANDARD FILE FORMAT

Line #	Value	Description	Required
Line 1	Lab Name	The Laboratory Name, which must match an existing laboratory in the database.	Yes
Line 2	Lab Package	The Lab Package, which must belong to the specified laboratory, and which must match an existing package in the database.	Yes
Line 3	Lab Reference Number	An identifying number, provided by the lab, which is used to group the samples and results that were analyzed together.	Yes
Line 3	Sample Dispatch	A dispatch number that is sent to the lab with instructions that tells the lab how to process the group of samples. This is the second field on this line, so separate the fields by the delimiter character (comma or tab)	No
Line 4	Analysis Date	The date that the laboratory analyzed the results, provided in the format YYYY-MM-DD (or matching local machine's regional settings).	Yes
Line 5	Element Headers	A list of the elements in the import file, matches the element identifier in the Lab Package Details. Each entry must be separated by a delimiter character (comma or tab).	Yes
Line 6+	Sample Data	The first column must be the sample number, the second column is the sample type (if the lab package uses sample type mapping), and then the remaining columns represent the data according to the list of elements. Each entry must be separated by a delimiter character (comma or tab).	Yes

### SYSTEM PREFERENCE OPTIONS

- **Preview Sample Type:** when enabled, a window will be displayed that shows the sample type (and standard code) of each sample being imported

Sample Type Preview

Sample Number	Sample Type	Standard Code
SS-X01	ASSAY	
SS-X02	ASSAY	
SS-X02-D	Dup	
SS-X03	STANDARD	FldStd
SS-X04	ASSAY	
SS-X05	STANDARD	FldStd
SS-X06	ASSAY	
SS-X06-D	Dup	

OK Cancel

- **Check Dispatch:** with this enabled, validations of the Dispatch Number will occur in Lab Import
  - If the dispatch from the file is not found in the database, a prompt will be issued to continue with the import without performing dispatch checks and updates
  - If the dispatch from the file is in the database with a status = NEW, a prompt will be issued to continue with the import without performing dispatch checks and updates
  - If the dispatch from the file is in the database with a status other than NEW or DISPATCHED (eg. SENT), a prompt will be issued to continue with the import without performing checks and updates unless the setting to update sample dispatch copies is enabled, then no prompt will be issued
  - Dispatch checks – Missing / Extra samples: Are all samples in the dispatch in the import file? Are all samples in the import file in the dispatch?
  
- **Update Sample Dispatch Copies:** if enabled, sample dispatch information will be updated in 'copies' of the sample dispatch records when importing into a database other than the Central, and records will be flagged to update the Central when Fusion Client is next started against the Central database

## STANDARD VALIDATION RULES

The samples imported with Lab Import are assigned a pass/fail status based on the performance of all defined standard results within the file.

**Batch Rules:** All elements of a standard are validated against the defined limits, and if any value falls outside of the acceptable limits, all samples within the batch are considered failed. This is the behavior without any extra rule configuration.

**Run Rules:** A custom import file (and template) can be used that has a grouping of samples into smaller sub-sets, called “runs”. It is possible to create a validation rule for a standard / element that says when a standard/element passes or fails, only pass or fail the samples that have the same value in the “run” column as the standard.

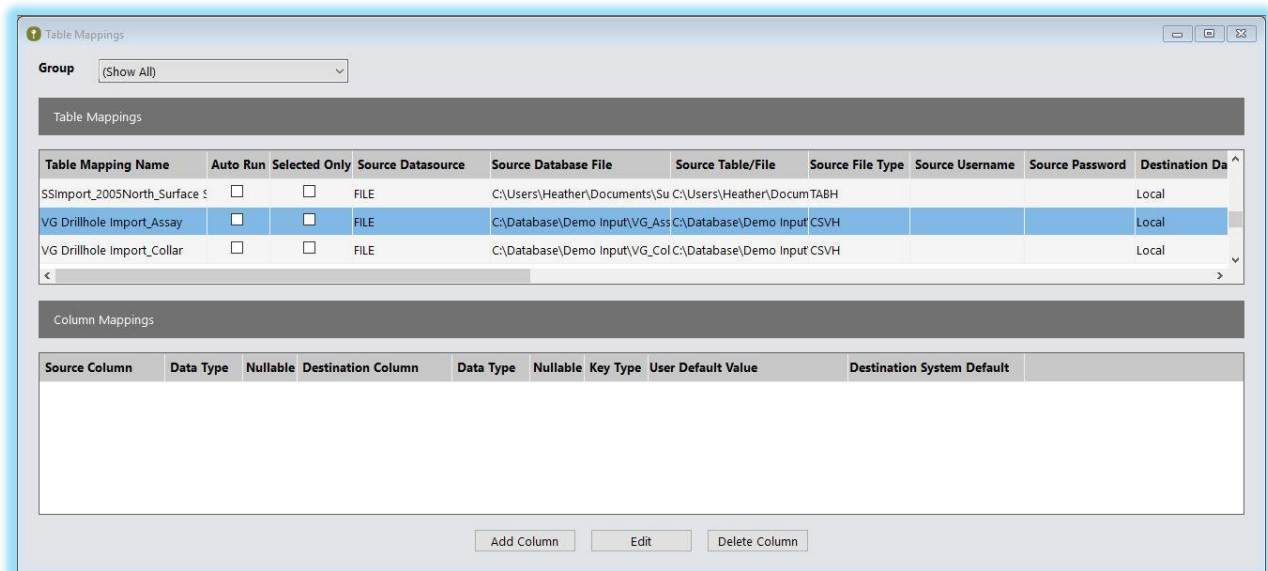
**Plus/Minus Rules:** Another type of validation rule can be created that will only pass or fail a certain number of surrounding samples, eg. “+/-2” would mean 2 samples above the standard and 2 samples below the standard (relative position as found in the import file)

**Std Dev Grade Range Rules:** Another type of validation rule can be created that will only pass or fail samples with results that fall in the same standard deviation as the standard result. You can also specify a Run Number to limit the validation of samples to those in the same run as the standard’s run.

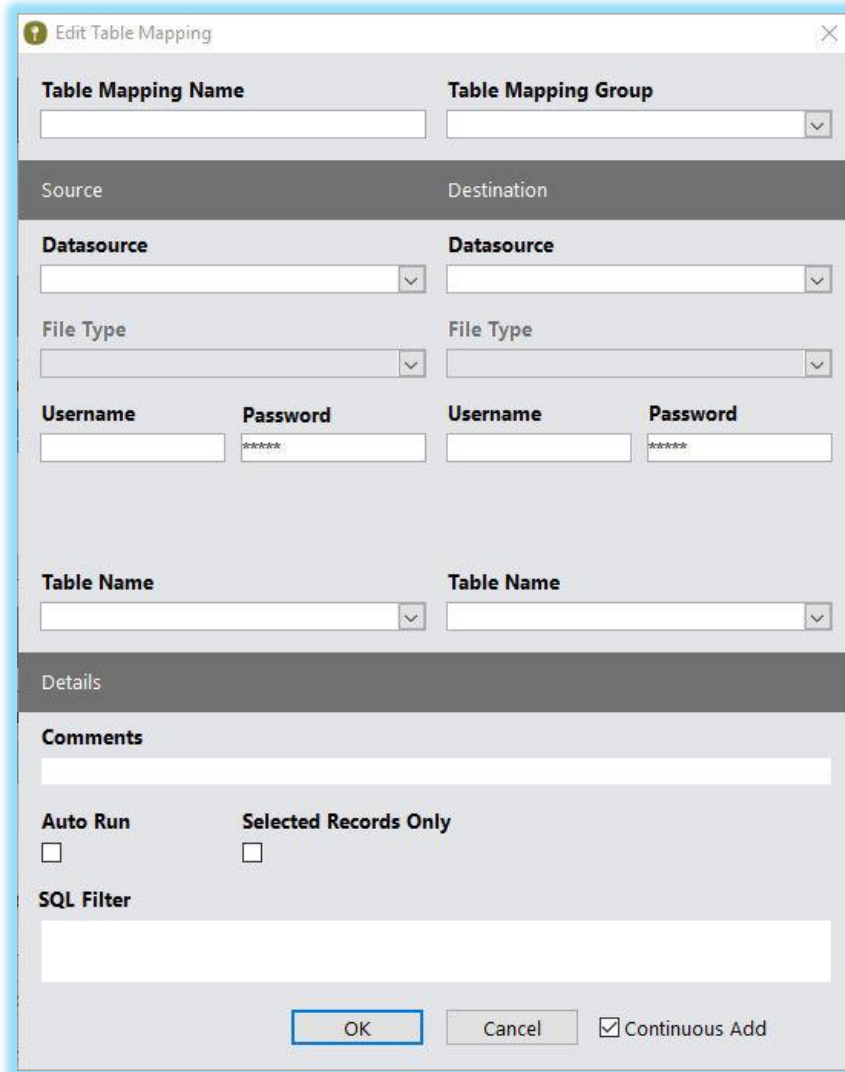
An import file can contain a variety of standards that have a mixture of these validation rules. As a result, there is an order to the application of the rules: Batch, Run, Std Dev Grade Range, then Plus/Minus.

---

## IMPORT: TABLE MAPPING



This utility, opened from the **Import > Table Mapping** menu, is used to bring data into the database, or export data out of the database in a very straightforward way – mapping tables and columns. Using the table mapping utility should not be used to bring in data that needs to be validated (with many links to reference tables, etc.), in that case Drill Hole Import or Sample Station Import should be used, or Lab Import for analytical results that need to be validated against standards.



**Edit Table Mapping**

**Table Mapping Name**  **Table Mapping Group**

---

**Source** **Destination**

**Datasource**  **Datasource**

**File Type**  **File Type**

**Username**  **Password**  **Username**  **Password**

**Table Name**  **Table Name**

---

**Details**

**Comments**

**Auto Run**  **Selected Records Only**

**SQL Filter**

Continuous Add

To define a new table mapping, click the New menu item and populate the window above.

### Table Mapping Details

- **Table Mapping Name:** the unique name for the mapping
- **Table Mapping Group:** optional, a grouping for the mapping

### Source

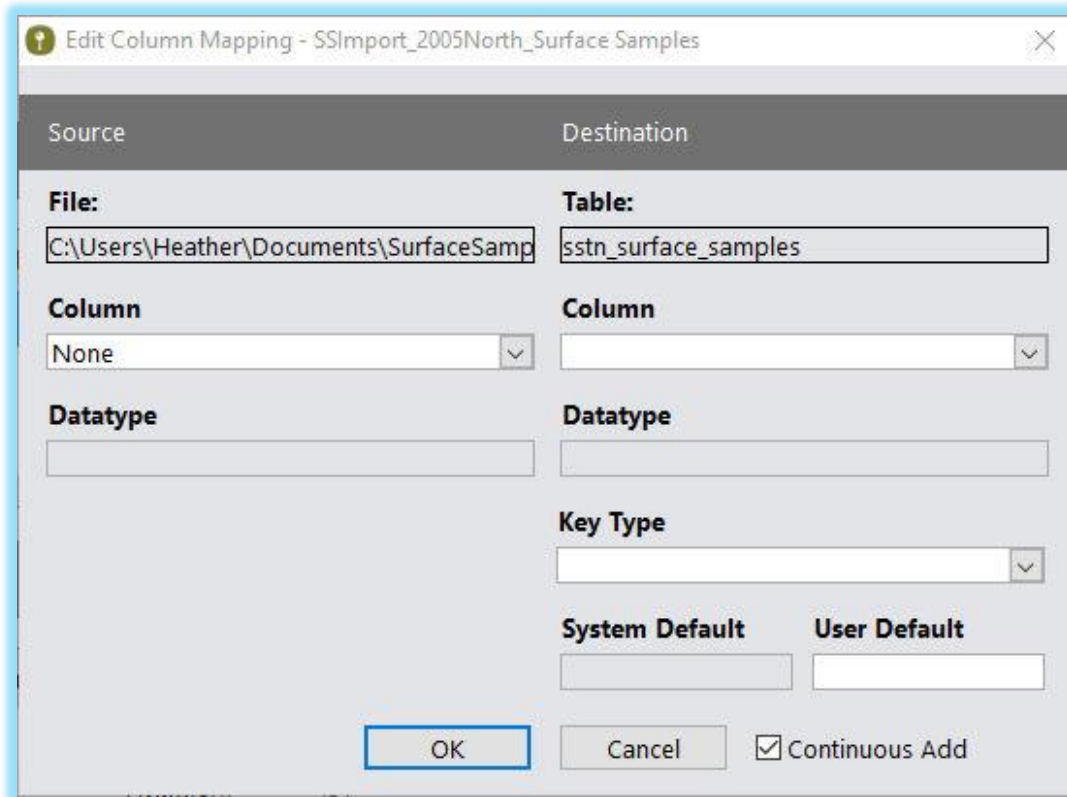
- **Datasource:** picklist, populated with ODBC Datasources that are already defined, plus FILE
- **File Type:** DSN if a datasource is selected, or Tab delimited / Comma delimited if FILE is chosen as datasource
- **Username, Password:** may be required if a database has been selected
- **Database File:** if MS Access File is selected as datasource, must pick the MDB file
- **Table Name:** if a database (MDB or otherwise) is selected, pick the table
- **File Name:** if FILE is selected, pick the file

### Destination

- **Datasource:** picklist, populated with ODBC Datasources that are already defined, plus FILE
- **File Type:** DSN if a datasource is selected, or Tab delimited / Comma delimited if FILE is chosen as datasource
- **Username, Password:** may be required if a database has been selected
- **Database File:** if MS Access File is selected as datasource, must pick the MDB file
- **Table Name:** if a database (MDB or otherwise) is selected, pick the table
- **File Name:** if FILE is selected, pick the file

### Details

- **Comments:** information about the table mapping
- **Auto Run:** checkbox to indicate this mapping should be executed when the "Auto Run" menu item is selected
- **SQL Filter:** a filter can be applied to the mapping to the mapping, useful when data is transfer involves a database table



Once the mapping is defined, column mappings can be added.

#### Source

- **File / Table:** not editable, depending on the source type (file or dsn) will display the source filename or table name
- **Column:** from a picklist, supply the source column name
- **Datatype:** not editable, displays the selected column's datatype/size

#### Destination

- **File / Table:** not editable, depending on the destination type (file or dsn) will display the destination filename or table name
- **Column:** from a picklist, supply the destination column name
- **Datatype:** not editable, displays the selected column's datatype/size
- **Key Type:** None / Primary. Whether the column is the primary key or not
- **System Default:** not editable, displays the selected column's database default if it exists
- **User Default:** supply a default to be used when the column's value is null

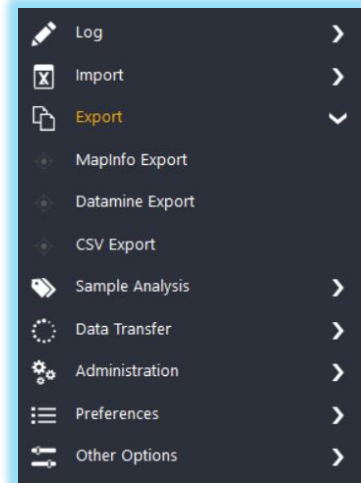


When all column mappings have been created, simply click the Move Data menu item to execute the table mapping.

## EXPORTS

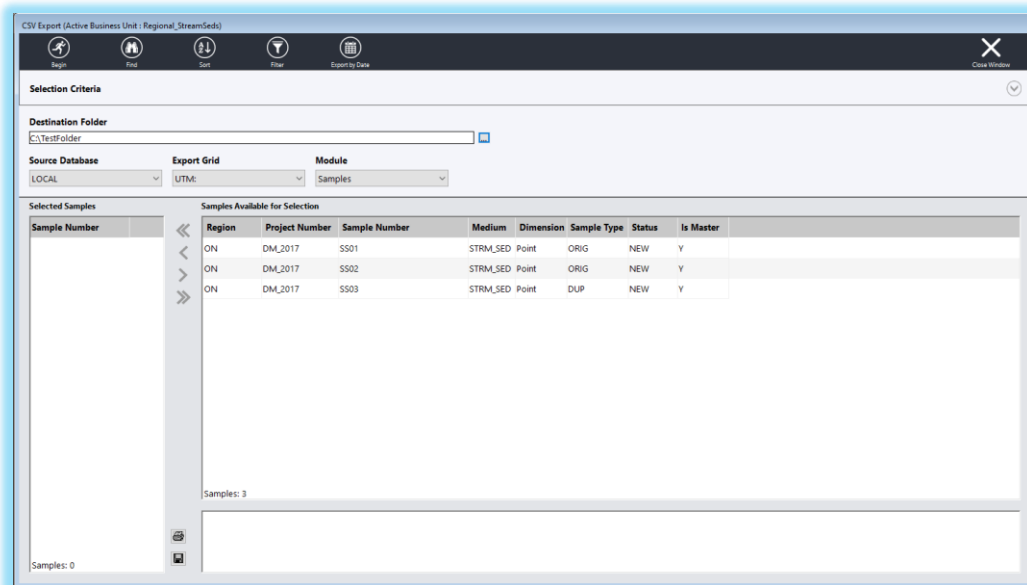
Sample Station can export data to MapInfo, Datamine, CSV and Text formats using pre-defined standard exports or custom exports designed using Report Manager and the Custom Export Designer available in Fusion Administrator. Sample Station can display up to 20 custom exports.

Exports can be accessed by selecting the desired export from the **Export** menu.



Below are the standard exports available in Sample Station:

- CSV Export
- Datamine Export
- MapInfo Export

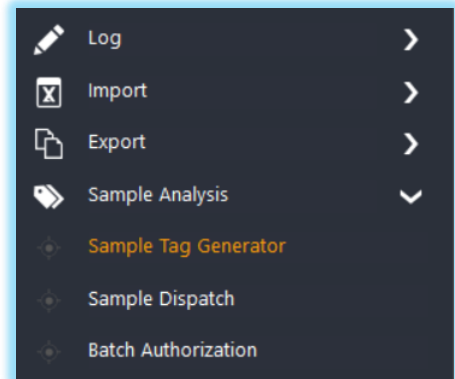




## SAMPLE ANALYSIS: SAMPLE TAG GENERATOR

The Sample Tag Generator utility is used to automate the creation of printable sample tags. You can print tags for existing samples, or you can specify a Sample Number and quantity, and the Sample Tag Generator will create tags for those samples. Entering some Selection Criteria can help to reduce the number of Samples or Dispatches that will be retrieved.

The Sample Tag Generator is available from the **Sample Analysis > Sample Tag Generator** menu item.



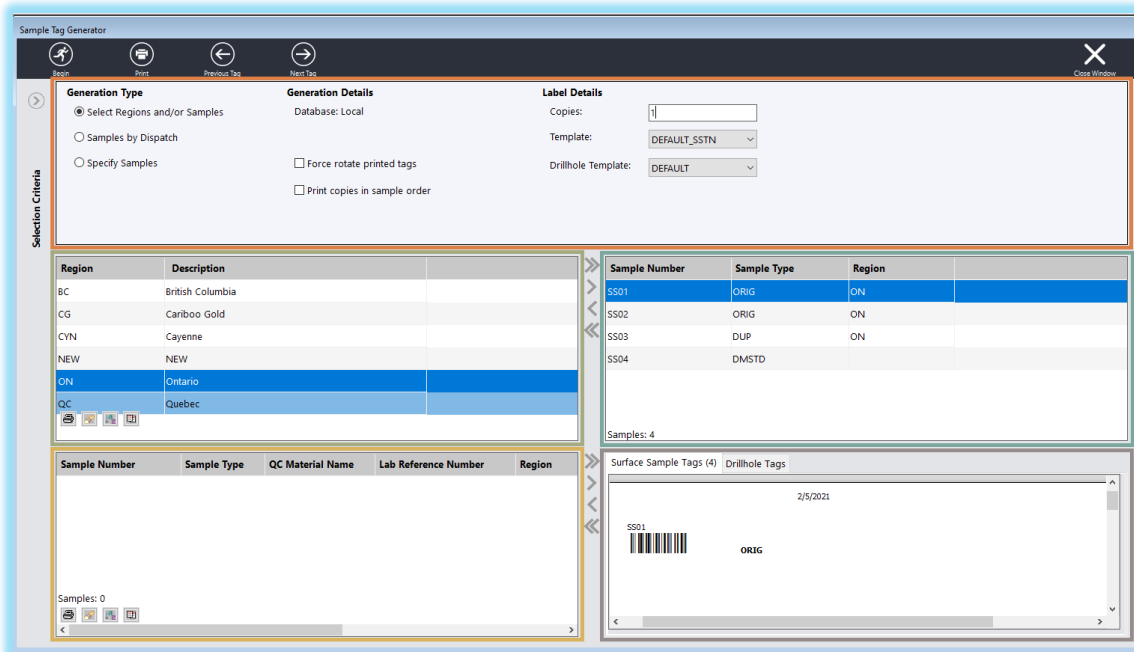
To start the creation of the tags, fill in the generation information (Generation Type, Generation Details, Label Details) and select samples, then click the Begin menu item.



Once the tags are generated, to print them simply click the Print menu item.



Use the Navigation buttons on the toolbar to move through the generated tags.



### Generation Settings

- **Generation Type:** how to specify the samples that are to have labels created
  - Select Regions and/or Samples:** use the Regions and Samples windows to select samples and drag to the top-right window
  - Samples by Dispatch:** use the Dispatch and Samples windows to select samples and drag to the top-right window
  - Specify Samples:** provide additional information in the Generation Details to create labels for samples that don't exist in the database
- **Generation Details:** information about the samples
  - Database:** visible when Generation Type is not 'Specify Samples'
  - Starting Sample Number:** visible when type = "Specify"; enter the first sample number
  - Quantity to Generate:** visible when type = "Specify"; enter how many samples altogether, first sample number will be incremented accordingly
  - Force rotate printed tags:** to rotate the tags 90-degrees when they print
  - Print copies in sample order:** determines whether copies of tags are printed as the samples are numbered, or as sets of sample tags (eg. S1, S1, S2, S2, S3, S3 or S1, S2, S3, S1, S2, S3)
- **Label Details:** information about the tags themselves
  - Copies:** specify how many copies of each tag will be created
  - Template:** picklist, select the custom tag to be created or use the supplied DEFAULT\_SSTN

### Regions / Dispatches

- Displays a list of the regions (when 'Select Regions and/or Samples' option is chosen) or dispatches (when 'Samples by Dispatch' option is chosen)
- The last region/dispatch that is clicked will have its samples displayed in the Samples list
- One or more regions/dispatches can be dragged to the Selected Samples list to have tags created for the entire region/dispatch
- Additional templates may become visible when 'Samples by Dispatch' is chosen because a Dispatch can contain samples of various types (Surface Sample, Drill Hole, Modular)

### Samples

- Displays a list of samples in the last-clicked region or dispatch
- One or more samples can be dragged to the Selected Samples list to have tags created

### Selected Samples

- Displays the list of samples that have been selected to have tags created

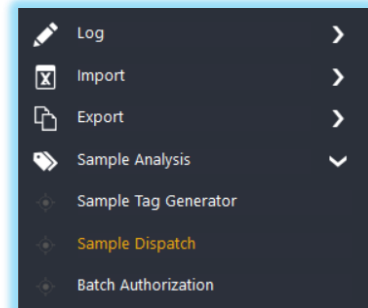
### Sample Tags

- Displays the tags once they have been generated

## SAMPLE ANALYSIS: SAMPLE DISPATCH

The Sample Dispatch module is used to group samples and assemble the instructions that will be sent to the laboratory for sample analysis.

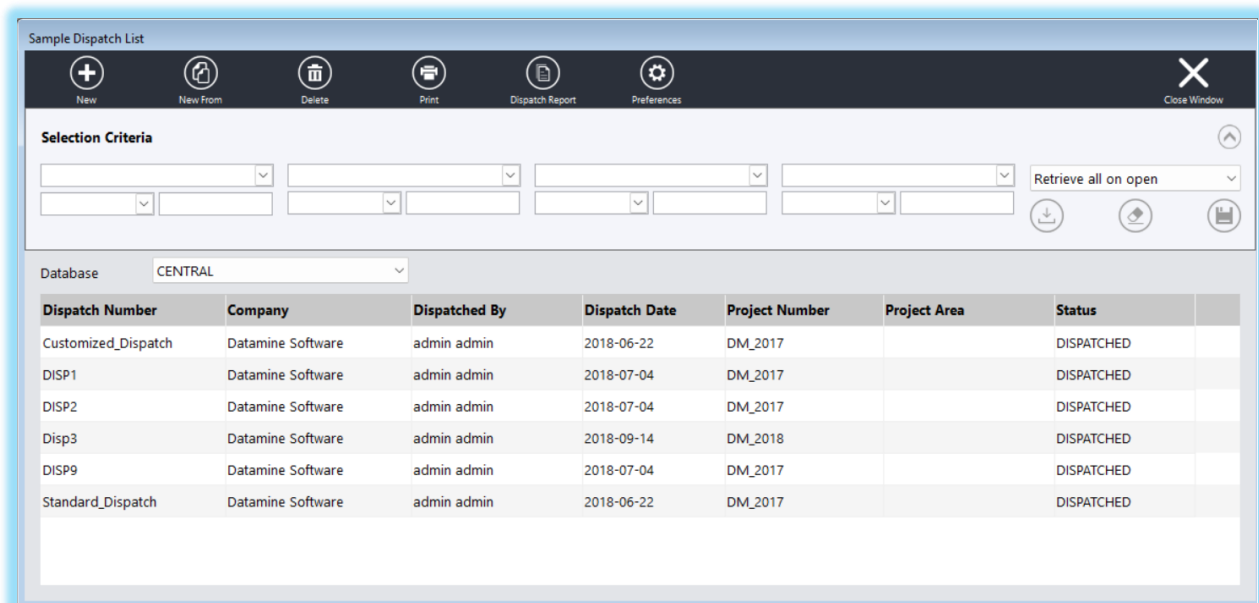
Open the Sample Dispatch module by clicking on the **Sample Analysis > Sample Dispatch** menu item.



## DISPATCH LIST

The list of sample dispatch records has the advanced filter bar added to it to allow you to filter the list by columns in the DHL\_SAMPLE\_DISPATCH\_HEADER and DHL\_SAMPLE\_DISPATCH\_SAMPLES tables. You can also save the filter, and have the list filtered when the window is reopened.

From this window you can add a new dispatch with the New button, or use the New From button to create a dispatch from an existing one – you will be prompted to confirm whether or not to automatically add the same samples to the new dispatch.



The screenshot shows the 'Sample Dispatch List' window. At the top, there is a toolbar with icons for New, New From, Delete, Print, Dispatch Report, and Preferences. Below the toolbar is a 'Selection Criteria' section with several dropdown menus and a 'Retrieve all on open' button. The main area displays a table of dispatch records with the following columns: Dispatch Number, Company, Dispatched By, Dispatch Date, Project Number, Project Area, and Status. The database is set to 'CENTRAL'.

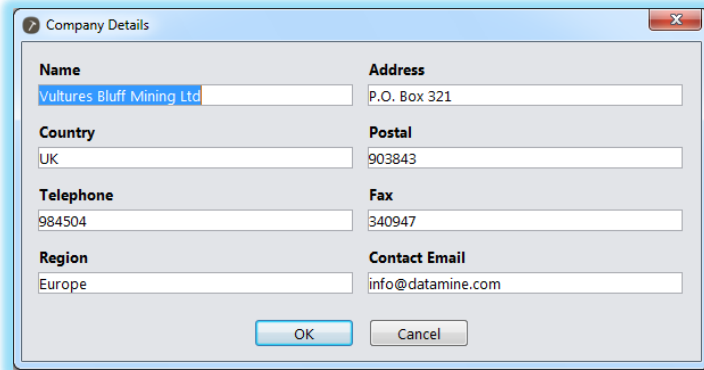
Dispatch Number	Company	Dispatched By	Dispatch Date	Project Number	Project Area	Status
Customized_Dispatch	Datamine Software	admin admin	2018-06-22	DM_2017		DISPATCHED
DISP1	Datamine Software	admin admin	2018-07-04	DM_2017		DISPATCHED
DISP2	Datamine Software	admin admin	2018-07-04	DM_2017		DISPATCHED
Disp3	Datamine Software	admin admin	2018-09-14	DM_2018		DISPATCHED
DISP9	Datamine Software	admin admin	2018-07-04	DM_2017		DISPATCHED
Standard_Dispatch	Datamine Software	admin admin	2018-06-22	DM_2017		DISPATCHED

## COMPANY DETAILS

Each sample dispatch record stores the company information, including a contact. To prevent the user from having to enter these details every time, which could result in data entry errors or missing data, the fields are automatically populated from defaults that are configured in each database.



To configure the Company Details, click on the Preferences menu item when the Sample Dispatch list window is opened.

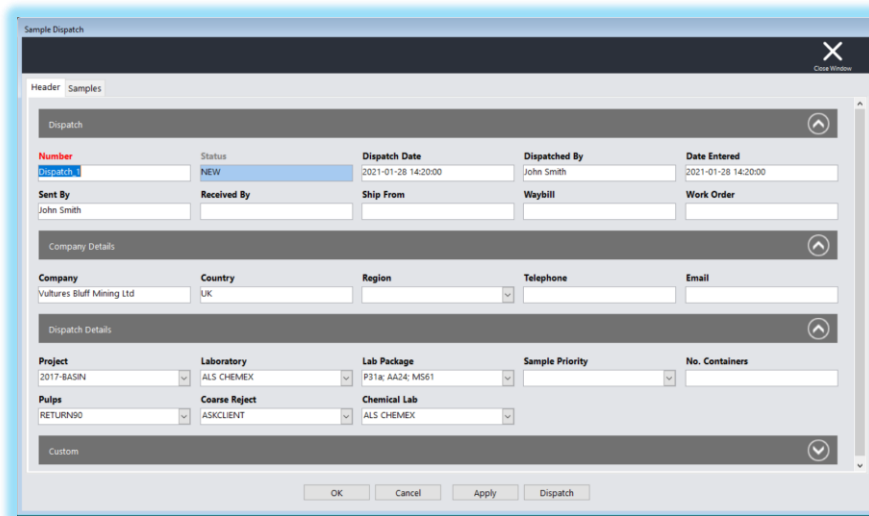


<b>Name</b>	<b>Address</b>
Vultures Bluff Mining Ltd	P.O. Box 321
<b>Country</b>	<b>Postal</b>
UK	903843
<b>Telephone</b>	<b>Fax</b>
984504	340947
<b>Region</b>	<b>Contact Email</b>
Europe	info@datamine.com

OK Cancel

## CREATING A NEW DISPATCH

The sample dispatch record is comprised of two sections: the header and the samples. It serves as a request that is sent with the samples to instruct the laboratory on what to analyze.



Dispatch				
<b>Number</b>	<b>Status</b>	<b>Dispatch Date</b>	<b>Dispatched By</b>	<b>Date Entered</b>
Dispatch	NEW	2021-01-28 14:20:00	John Smith	2021-01-28 14:20:00
<b>Sent By</b>	<b>Received By</b>	<b>Ship From</b>	<b>Waybill</b>	<b>Work Order</b>
John Smith				

Company Details				
<b>Company</b>	<b>Country</b>	<b>Region</b>	<b>Telephone</b>	<b>Email</b>
Vultures Bluff Mining Ltd	UK			

Dispatch Details				
<b>Project</b>	<b>Laboratory</b>	<b>Lab Package</b>	<b>Sample Priority</b>	<b>No. Containers</b>
2017-BASIN	ALS CHEMEX	P31k-AA24-M561		
<b>Pulp</b>	<b>Coarse Reject</b>	<b>Chemical Lab</b>		
RETURN90	ASKCLIENT	ALS CHEMEX		

OK Cancel Apply Dispatch

*The Header information for a Sample Dispatch record*

The Sample Dispatch Header is customizable, both in column structure and layout. The layout configuration is performed with the same window as the Collar Layout configuration. This window is accessible using a right-click of the mouse, which displays a pop-up menu allowing you to 'Toggle Edit Mode'.

### Dispatch

- **Number:** a unique name for the dispatch. If a template is used, it may be updated based on information entered in the Dispatch Details (eg. Project)
- **Status:** not editable, identifies the current status of the record (NEW, DISPATCHED, SENT)
- **Dispatched By:** the username of the person dispatching the samples. It defaults to the current user's FirstName + LastName, but can be edited.
- **Dispatch Date:** the date the samples were sent out. It can be entered directly or picked from a calendar popup when the field is double-clicked.
- **Date Entered:** the date the information was entered.
- **Sent By:** the name of the person that is shipping the dispatch
- **Received By:** the name of the user/lab expecting the dispatch
- **Ship From:** the pickup location for the sample dispatch
- **Waybill:** the shipping or tracking number for the dispatch
- **Work Order:** the work order to which this dispatch is charged
- **Carrier:** from a picklist, the name of the company that will transport the samples from the site to the lab.

### Company Details

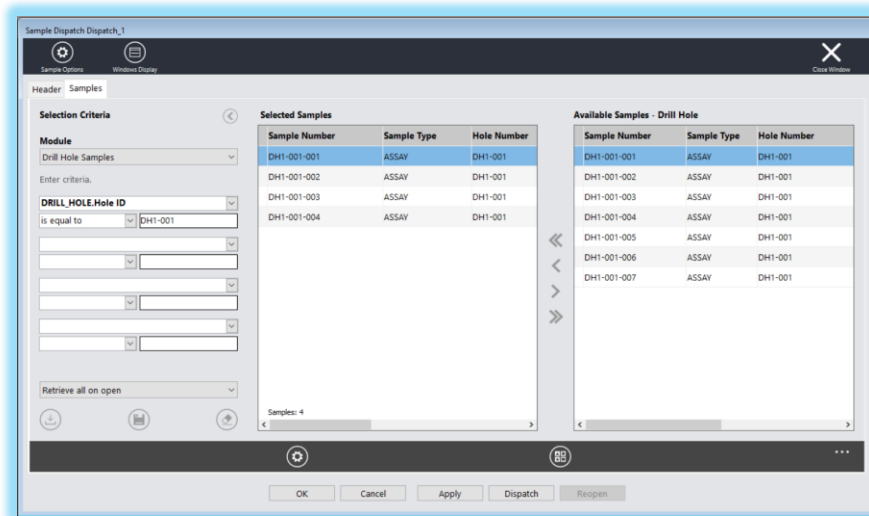
- Pre-populated with the defaults from the Company Details window, configured from the Preferences menu; can be edited on the screen
- Company name, address and contact information

### Dispatch Details

- **Project Area:** this is the location in the project where the samples are located, from a picklist linked to 'Hole Locations'
- **Project:** this the project where the samples are located, from a picklist linked to 'Projects' (note: there is no actual validation to ensure samples in dispatch are from holes/samples belonging to this project)
- **Laboratory:** the laboratory that is performing the analysis, from a picklist
- **Lab Package:** the lab package that will be used, defining the analysis to be performed, from a picklist
- **Sample Priority:** the priority given to this request for analysis, from a picklist
- **No. Containers:** the total number of containers being shipped to the lab as part of this dispatch.
- **Pulps:** the instructions to the lab for what is to be done with the undersized material, or pulp, from a picklist
- **Coarse Reject:** the instructions to the lab for what is to be done with the oversized material, from a picklist
- **Preparation Lab:** if different, the name of the lab that is performing the preparation of the samples, from a picklist
- **Comments:** general comments about the dispatch
- **Special Instructions:** additional instructions to the lab regarding the handling or analysis of the samples

Three system options can be enabled that have an impact on the Sample Dispatch:

- **Use Filters to Restrict Lab Package Selection:** enabling this setting adds two fields (Analysis Type, Hole/Medium) to the Sample Dispatch Header section in a dispatch that will filter the list of lab packages. This also requires additional configuration in the Lab Package.
- **Use Lab Package to Filter Available Samples:** this setting will filter the list of available samples to holes that have the same Hole Type or surface samples that have the same Medium Code as what is associated with the selected lab package.
- **Use Lab Package to Validate Selected Samples:** this setting will validate the dispatch's selected samples, allowing only samples that belong to holes that have the same Hole Type or surface samples that have the same Medium Code as what is associated with the selected lab package.



The Sample information for a Sample Dispatch record

#### Selection Criteria

- A means of filtering the available samples list
- **Module:** Channel / Drill Hole / Surface / Standards / Composite. The type of samples to display in the Available Samples window
- **Criteria:** specify up to 4 columns for filtering
- Save the filter, set 'retrieve on open' options, retrieve the filtered data

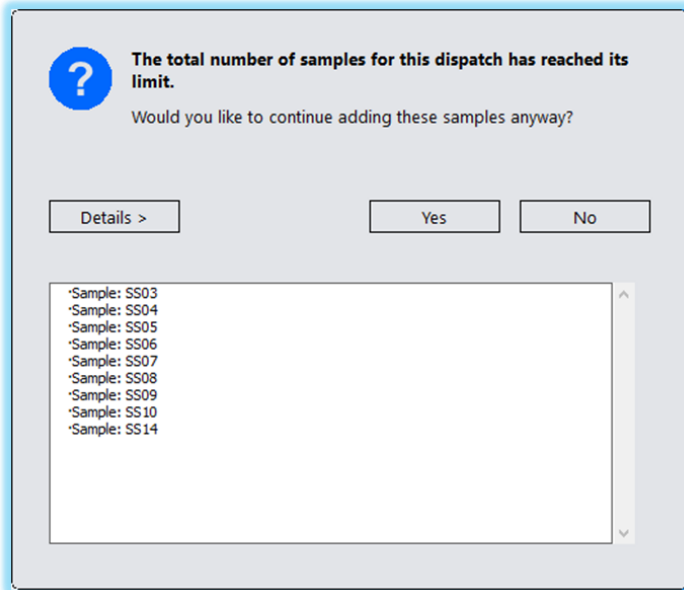
#### Selected Samples

- Drag/drop samples from the Available list to the Selected list
- Retrieves and displays the samples that have been saved to the Dispatch

#### Available Samples

- Displays the available samples for the chosen module which meet the defined criteria

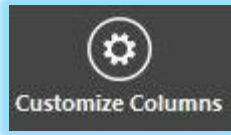
A System or Business Unit Preference exists which can limit the number of sample that can be added to a dispatch. Along with a number limit, administrators can set the action that will occur when the limit has been reached (Warn or Restrict).



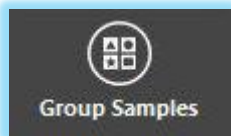
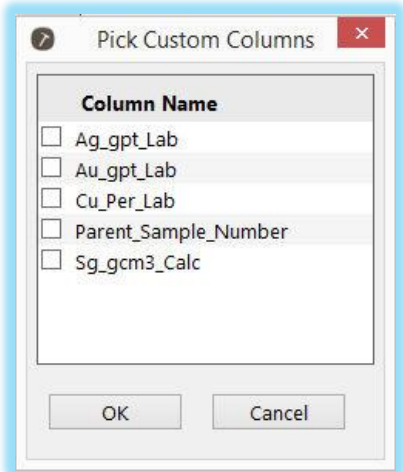
*An example of the warning message that is received when the Dispatch Limit has been reached*



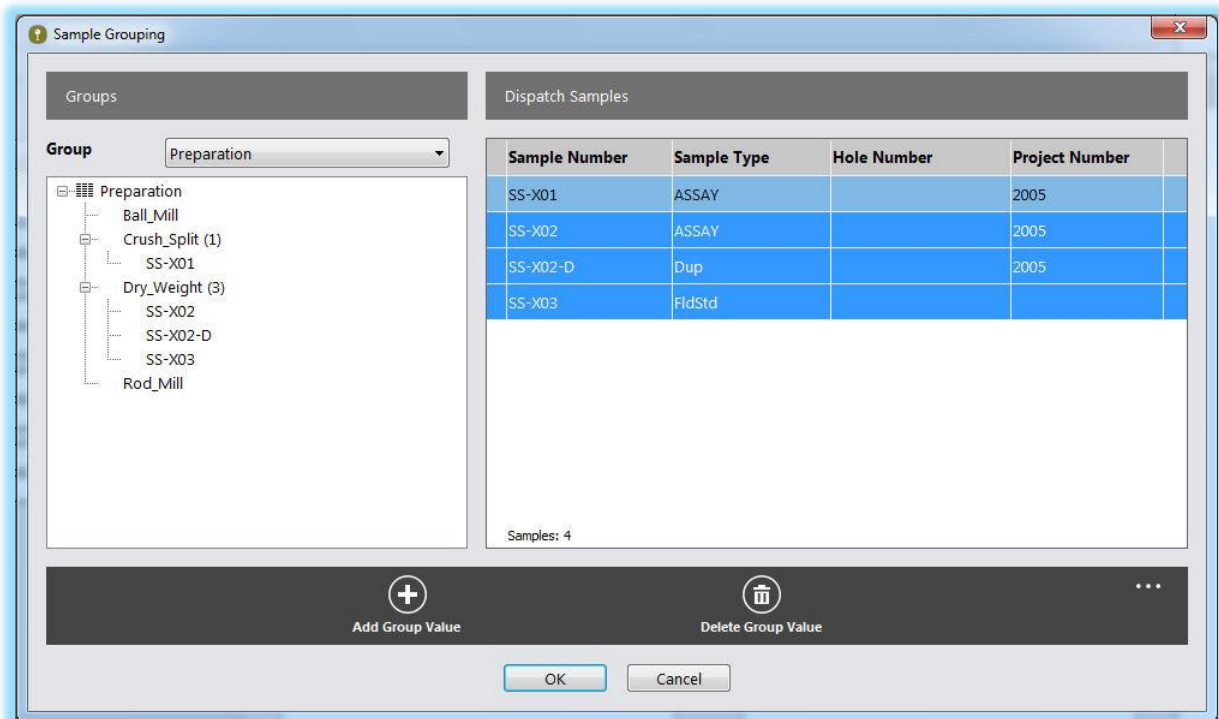
*An example of the restriction message that is received when the Dispatch Limit has been reached*



To customize the Available Samples window, click the Customize Columns button to add columns to the window. The editor window will not open if the “Include QA/QC with Available Samples” option is checked (see Options menu when Samples tab has focus).



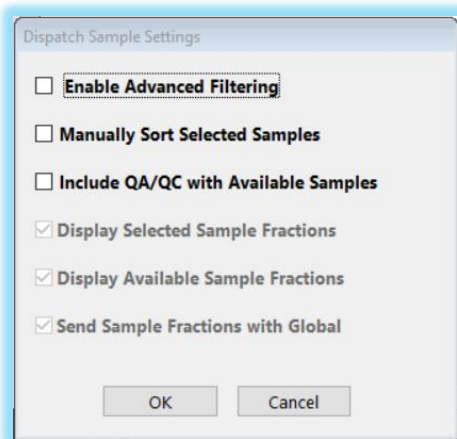
The samples that have been selected for dispatch can be grouped further. Click the Group Samples button to open the Sample Grouping window.



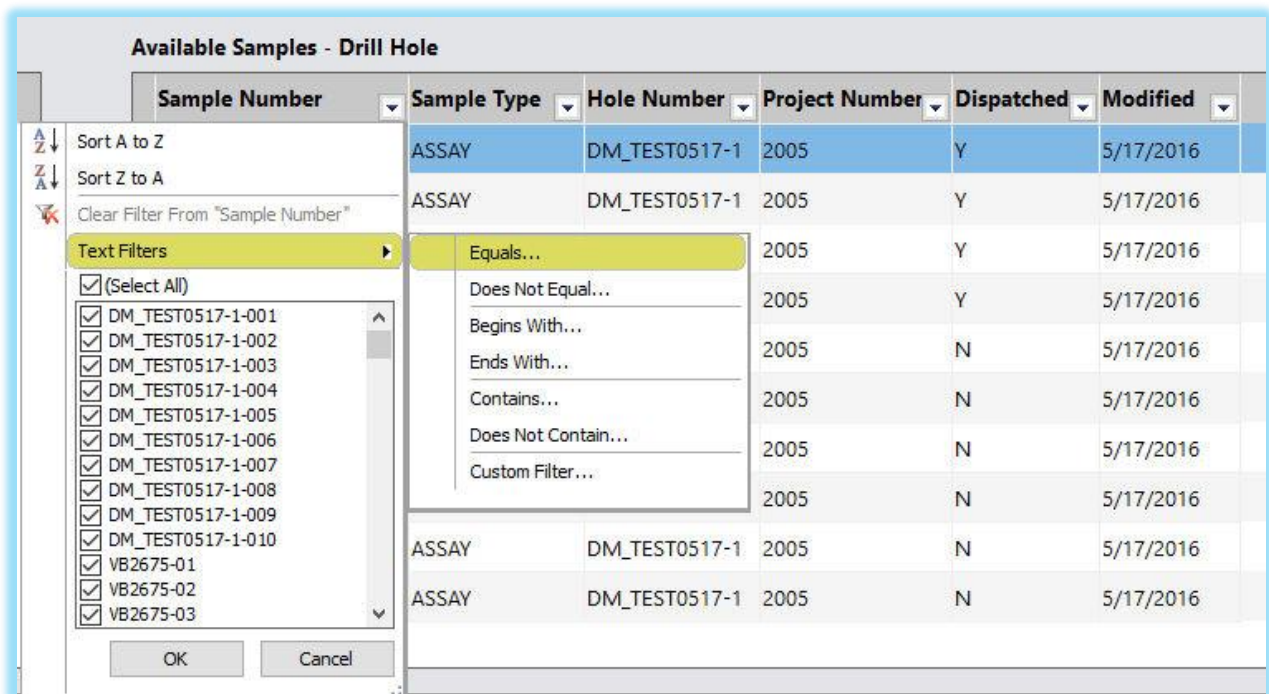


- The groups are configured in Fusion Administrator and can be defined as either a picklist of known reference data (eg. Preparation), or as an edit field, where the Group Values will be added at the time of dispatch (eg. Seal Number).
- Warnings are implemented to alert the user if there are samples in the dispatch that are not assigned to a group.
- Samples can be assigned to multiple group values, but not under the same group (eg. to a Preparation and a Seal Number is allowed, but not to 2 preparations or 2 Seal Numbers)

Additional settings for the Samples window are available under the Options menu.



**Advanced Filtering:** with this enabled, little arrows appear in each of the column labels in the Available Samples window to allow for the specification of a filter on the column



**Manually Sort Samples:** with this enabled, the samples in the Selected Samples window can be dragged and dropped to create the list in any order desired; when disabled, the list is sorted alphabetically on Sample Number.

Selected Samples		
Sample Number	Sample Type	Hole Number
DM_TEST0517-1-001	ASSAY	DM_TEST0517-1
DM_TEST0517-1-010	ASSAY	DM_TEST0517-1
DM_TEST0517-1-002	ASSAY	DM_TEST0517-1
DM_TEST0517-1-009	ASSAY	DM_TEST0517-1
DM_TEST0517-1-003	ASSAY	DM_TEST0517-1
DM_TEST0517-1-008	ASSAY	DM_TEST0517-1
DM_TEST0517-1-004	ASSAY	DM_TEST0517-1
DM_TEST0517-1-007	ASSAY	DM_TEST0517-1
DM_TEST0517-1-005	ASSAY	DM_TEST0517-1
DM_TEST0517-1-006	ASSAY	DM_TEST0517-1

Samples: 10

**Include QA/QC with Available Samples:** when enabled, standards will be visible in the Available Samples list along with the samples for the chosen module (eg. Drill Hole).

**Display Selected Sample Fractions:** option to show sample fractions in the Selected Samples window.

**Display Available Sample Fractions:** option to show sample fractions in the Available Samples window.

**Send Sample Fractions with Global:** when enabled, if a sample that has size or density fractions is dragged to the Selected Samples list, the sub-samples will also be added to the Selected Samples list (although they won't be visible unless the 'display' option is enabled).



Clicking the Window Display toolbar item will change the orientation of the Selected and Available Samples windows, from side-by-side to top-bottom, and vice versa.

Selected Samples					
Sample Number	Sample Type	Hole Number	Project Number	Number of Bags	Comments
DM_TEST0517-1-001	ASSAY	DM_TEST0517-1	2005	1	
DM_TEST0517-1-010	ASSAY	DM_TEST0517-1	2005	1	
DM_TEST0517-1-002	ASSAY	DM_TEST0517-1	2005	1	

Samples: 10

⏪ ⏩ ⏴ ⏵

Available Samples - Drill Hole						
Sample Number	Sample Type	Hole Number	Project Number	Dispatched	Modified	
DM_TEST0517-1-001	ASSAY	DM_TEST0517-1	2005	Y	5/17/2016	
DM_TEST0517-1-002	ASSAY	DM_TEST0517-1	2005	Y	5/17/2016	
DM_TEST0517-1-003	ASSAY	DM_TEST0517-1	2005	Y	5/17/2016	

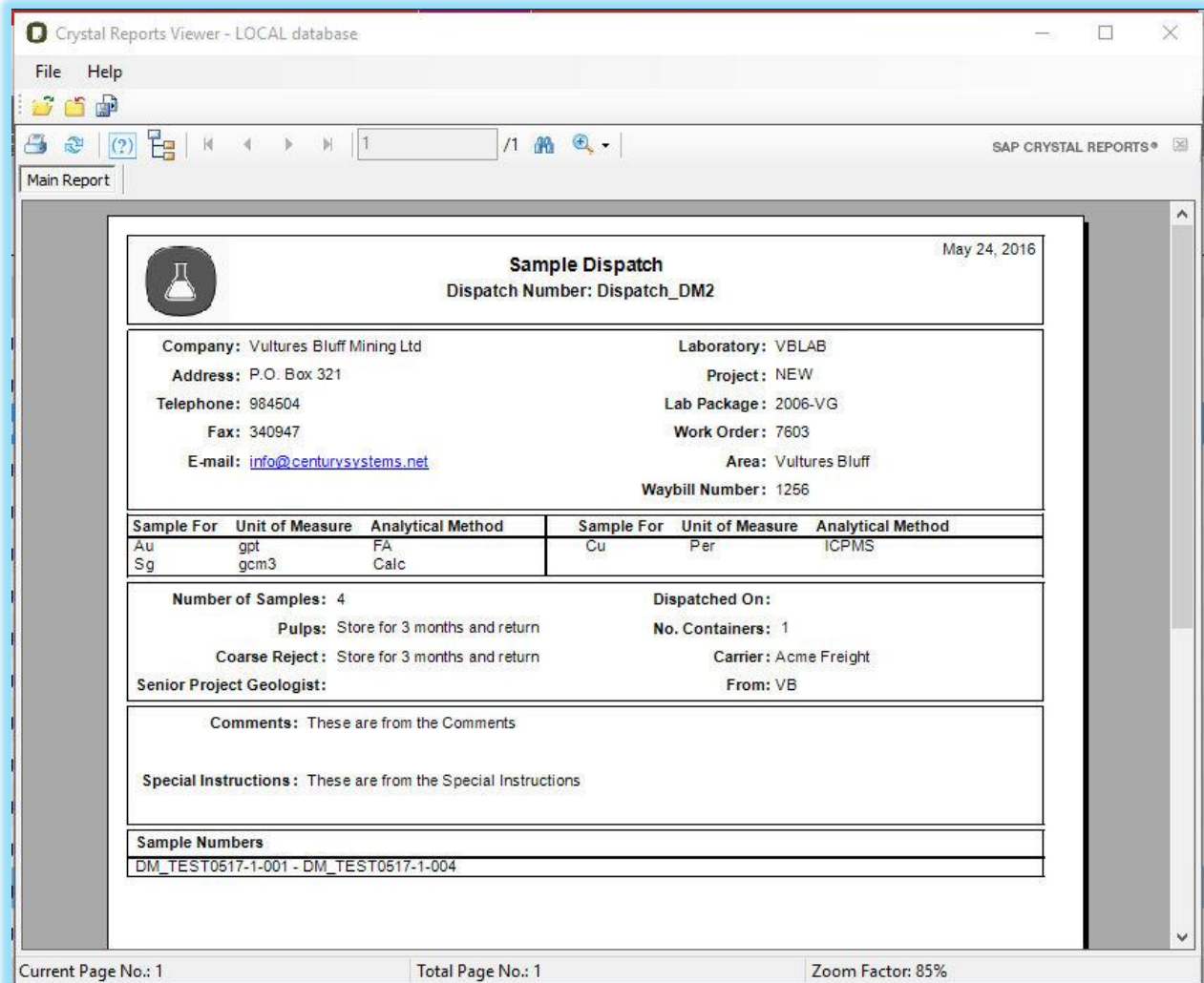
### DISPATCHING A SAMPLE DISPATCH

When all information is entered in the header, and the samples are selected and organized, the record is ready to be dispatched. At any point, the record can be closed and saved for further editing; however, when it is complete, click the “Dispatch” button to finalize the record. The status will be changed to “DISPATCHED” and all the fields will be disabled (locked for editing).

- A Sample Dispatch can be reopened for editing by a user with the QUALIFIED PERSON profile, where the status will be reset to “NEW”
- A Sample Dispatch will receive a status of “SENT” when a record in with “DISPATCHED” status is transferred from the Local to Fusion Remote or Central, or from Fusion Remote to Central. The ‘copy’ that remains in the source database has its status set to “SENT”.



Immediately following the Dispatch action, Crystal Reports Viewer will open the Sample Dispatch Report for this record. At any time, you can also select a dispatch from the list and use the Report menu item to open the Dispatch Report.




Crystal Reports Viewer - LOCAL database

File Help

1 / 1

SAP CRYSTAL REPORTS\*

Main Report



### Sample Dispatch

Dispatch Number: Dispatch\_DM2

May 24, 2016

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<b>Company:</b> Vultures Bluff Mining Ltd	<b>Laboratory:</b> VBLAB
<b>Address:</b> P.O. Box 321	<b>Project:</b> NEW
<b>Telephone:</b> 984504	<b>Lab Package:</b> 2006-VG
<b>Fax:</b> 340947	<b>Work Order:</b> 7603
<b>E-mail:</b> <a href="mailto:info@centurvsystems.net">info@centurvsystems.net</a>	<b>Area:</b> Vultures Bluff
<b>Waybill Number:</b> 1256	

---

Sample For	Unit of Measure	Analytical Method	Sample For	Unit of Measure	Analytical Method
Au	gpt	FA	Cu	Per	ICPMS
Sg	gcm3	Calc			

---

<b>Number of Samples:</b> 4	<b>Dispatched On:</b>
<b>Pulps:</b> Store for 3 months and return	<b>No. Containers:</b> 1
<b>Coarse Reject:</b> Store for 3 months and return	<b>Carrier:</b> Acme Freight
<b>Senior Project Geologist:</b>	<b>From:</b> VB

---

**Comments:** These are from the Comments

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**Special Instructions:** These are from the Special Instructions

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**Sample Numbers**

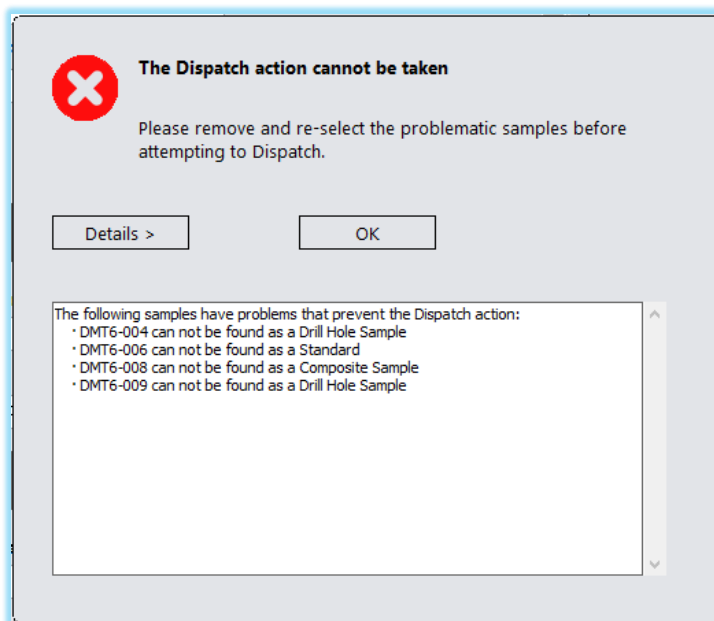
DM\_TEST0517-1-001 - DM\_TEST0517-1-004

Current Page No.: 1      Total Page No.: 1      Zoom Factor: 85%

### LOCK DISPATCHED SAMPLES

“Lock Samples in Data Tables once they are dispatched”, a system preference available in Fusion Administrator, offers a way to disable the editing (depths, sample number) or deletion of samples that belong to a Sent Dispatch. Once enabled, a new workflow for the Sample Dispatch module will be established:

- all Dispatch records can be added, edited, and dispatched from the Local Database only
- the only samples that will be available for selection are those that are the ‘master’ version (ie. holes are CheckedOut or New)
- validation will occur before dispatching to confirm that the samples added to the dispatch still match the type of sample in the database (in case S1, S2, S3 were added to a dispatch and then renamed as a standard ‘S2’ was added; S2 is no longer a sample and a validation message should warn the user of the change)



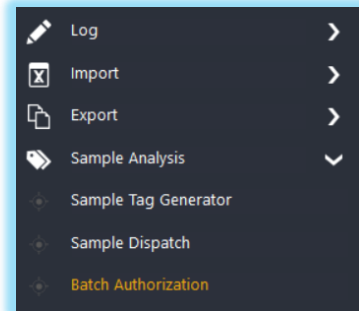
When the Sample Dispatch module is opened against other database environments (Central, Fusion Remote):

- the NEW button is not available
- on a dispatch with ‘DISPATCHED’ status, the ‘Reopen’ button will remain disabled to users with QUALIFIED PERSON profile

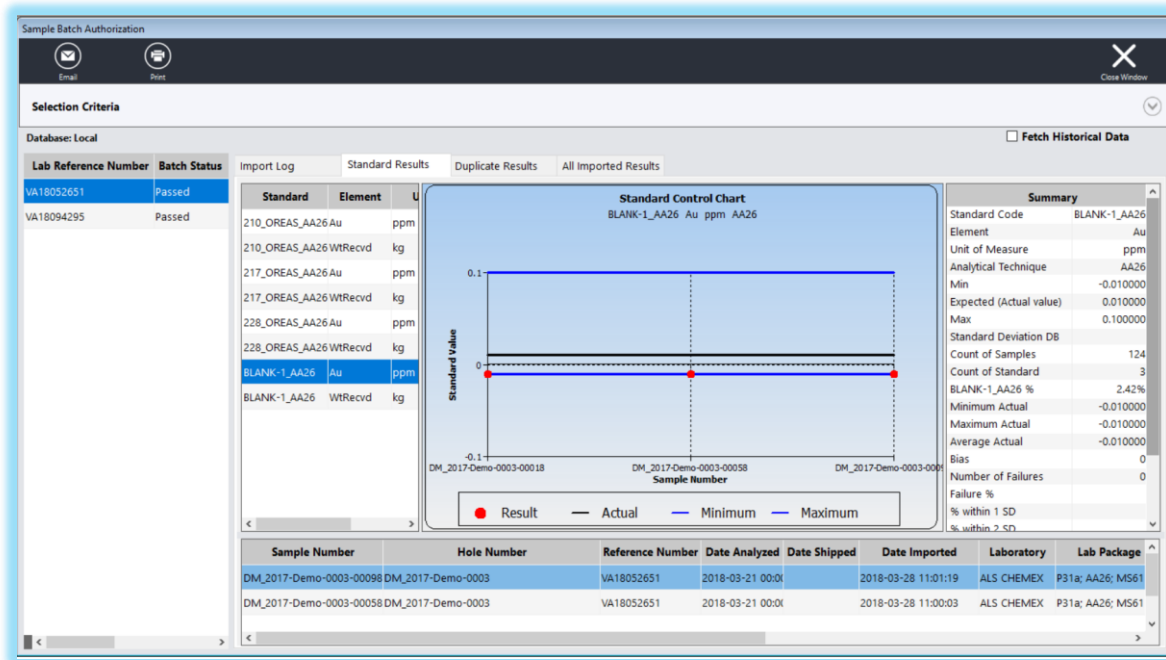
## SAMPLE ANALYSIS: BATCH AUTHORIZATION

The Batch Authorization utility is a QA-QC analysis tool that allows users to review lab import information and control charts.

The Batch Authorization window is accessed from the **Sample Analysis > Batch Authorization** menu item.



The Batch Authorization module contains a list of the lab reference numbers (batches) along with their status, from the last time a file with the lab reference number was imported.



The Batch Authorization module is comprised of three components: Selection Criteria, Batch List, and Batch Summary tabs.

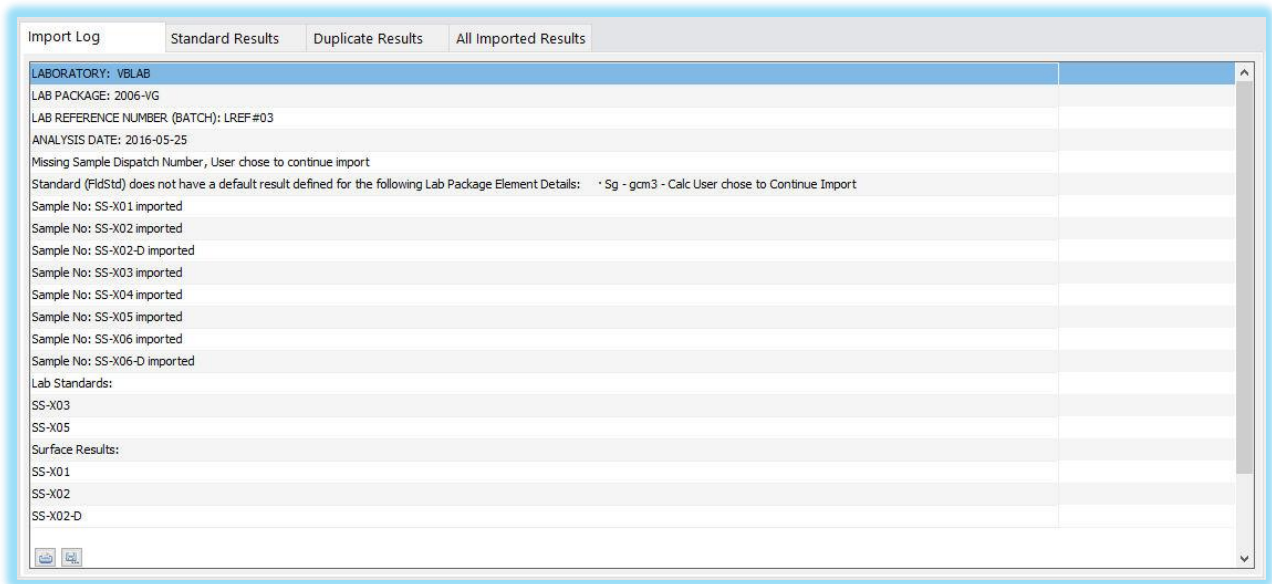
**Selection Criteria:** Advanced Filter Bar, which allows for the specification of up to 4 columns to aid in the retrieval of a reduced set of data. The filter can be saved, along with the Retrieve options. The criteria will filter the rows in the Batch List.

**Batch List:** is a list of the most current lab reference numbers along with their batch status, which meets the specified selection criteria.

**Batch Summary tabs:** for the selected lab reference number, you can view several tabs of information: Import Log, Standard Results, Duplicate Results, and All Imported Results

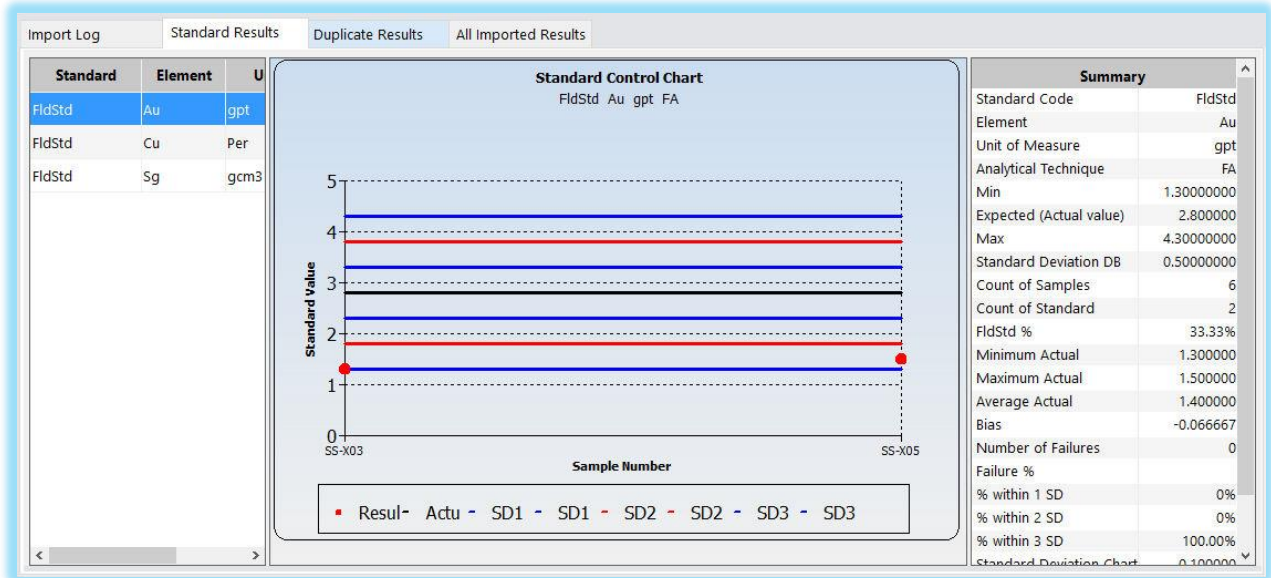
There is also a **Fetch Historical Data** checkbox that will impact the results that are included in the Batch Summary. When enabled, it will retrieve all samples/standards associated with the Batch Number; when disabled, it will only retrieve the samples/standards associated with the last import of the Batch.

**Import Log:** displays the information that was logged when a file with the lab reference number was last imported with Lab Import.

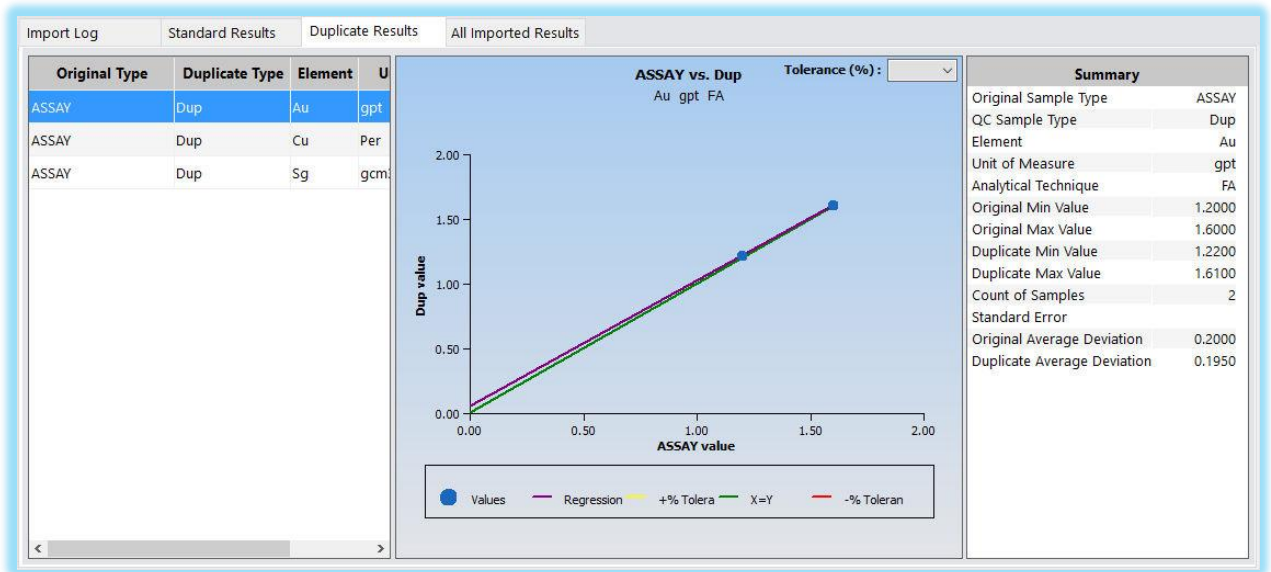


**NOTE:** the Lab Import Summary data transfers to the Central Database during a Check In or Copy In of any object, and is deleted from the Local Database after it moves; so when reviewing data in the Local (or Fusion Remote) database, it is possible the information is no longer available for viewing

**Standard Results:** displays the charts for the standards that were imported when the lab reference number was last imported with Lab Import.



**Duplicate Results:** displays the charts for comparison of original results and duplicate results.

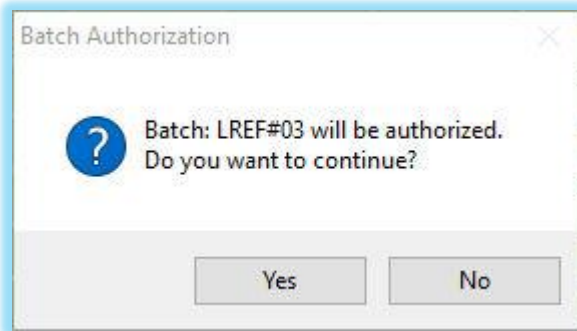


**All Imported Results:** displays a list of all the samples and standards that were imported when the lab reference number was last imported with Lab Import. It is from this window that the user with Qualified Person profile can perform several actions on the samples or the batch.

Hole Number	Sample Number	Depth From	Depth To	Length	Sample Type	CU_PER_ICPMS	AU_GPT_LAB	SG_GCM3_CALC	CU_PER_LAB	AU_GPT_F
	SS-X01				ASSAY		1.100000	3.300000	2.200000	
	SS-X02				ASSAY		1.200000	3.400000	2.300000	
	SS-X02-D				ASSAY		1.220000	3.400000	2.280000	
	SS-X03				STANDARD	2.400000		3.500000		1.300
	SS-X04				ASSAY		1.400000	3.600000	2.500000	
	SS-X05				STANDARD	2.600000		3.700000		1.500
	SS-X06				ASSAY		1.600000	3.800000	2.700000	
	SS-X06-D				ASSAY		1.610000	3.700000	2.680000	



When a Lab Import completes, and all standards have passed, the batch receives a status of Passed. A Qualified Person can then validate the batch using the Authorize button.

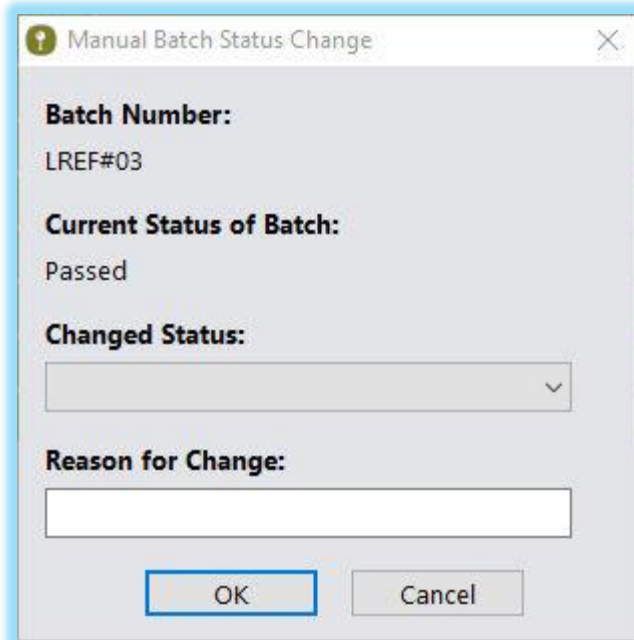


Confirmation window after choosing to authorize the batch



The Change Status will work to manually change the status of a batch, instead of authorizing, or it can be used to change the status of individual samples. Which object it will affect depends on whether samples are selected.





**Manual Batch Status Change**

**Batch Number:**  
LREF#03

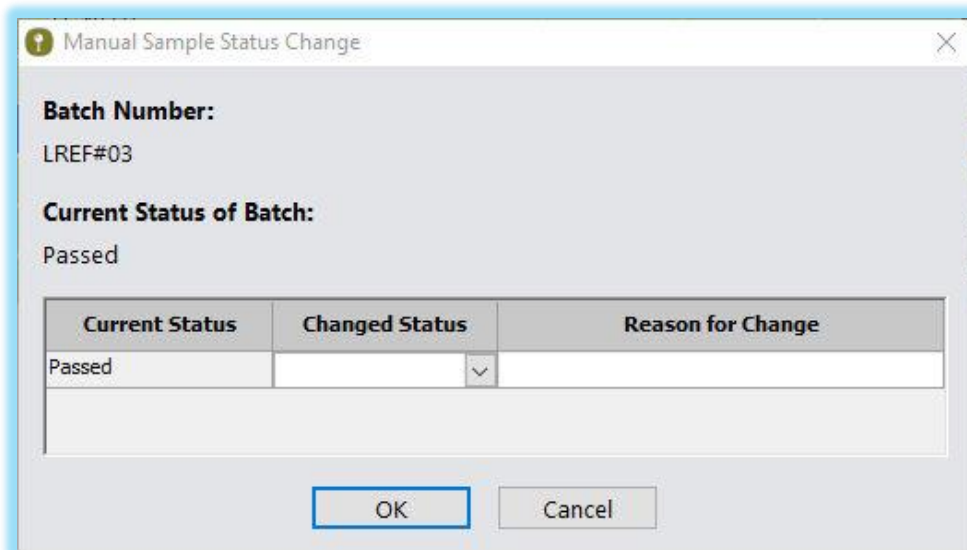
**Current Status of Batch:**  
Passed

**Changed Status:**

**Reason for Change:**

OK Cancel

- This window will display when no samples have been selected, and the action will be performed on the batch itself.
- The Changed Status picklist will list possible valid status options, based on the current status of the batch.
- The “Status Change Options” reference table can be configured in Fusion Administrator.



**Manual Sample Status Change**

**Batch Number:**  
LREF#03

**Current Status of Batch:**  
Passed

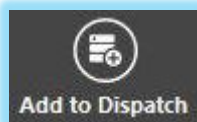
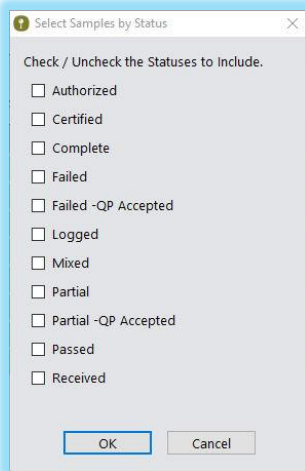
Current Status	Changed Status	Reason for Change
Passed	<input type="text" value=""/>	<input type="text" value=""/>

OK Cancel

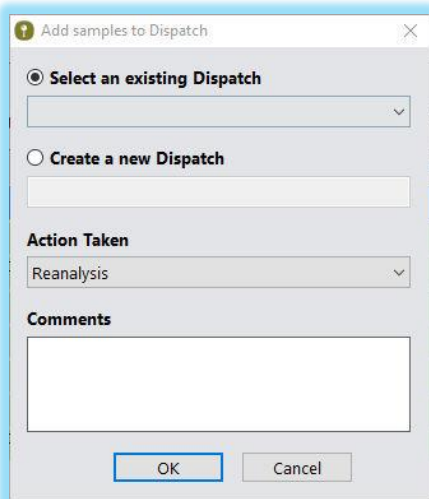
- This window will display the unique status values for the samples that have been selected, and as a group (by status) they can be changed to another status.
- The Changed Status picklist will list possible valid status options, based on the Current Status.
- The “Status Change Options” reference table can be configured in Fusion Administrator.



The Select Status button can be used to open a window that displays all sample status values, allowing you to choose one or more statuses. When the window closes, all samples in the batch that have a status that matches the chosen values will be automatically selected.



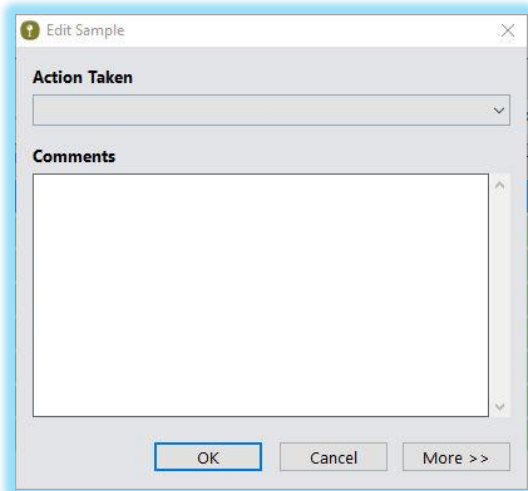
The Qualified Person may find that the results that are returned by the lab will require a second look (reanalysis). They can select individual samples from the list and then click the Add to Dispatch button.



- This window will appear to let you assign the samples to a Dispatch (either an existing, or a new dispatch)
- The Action Taken is set to Reanalysis
- Comments can be entered
- Following the click of the OK button, you will be prompted to open the sample dispatch module, so that you can select and open the dispatch for further editing



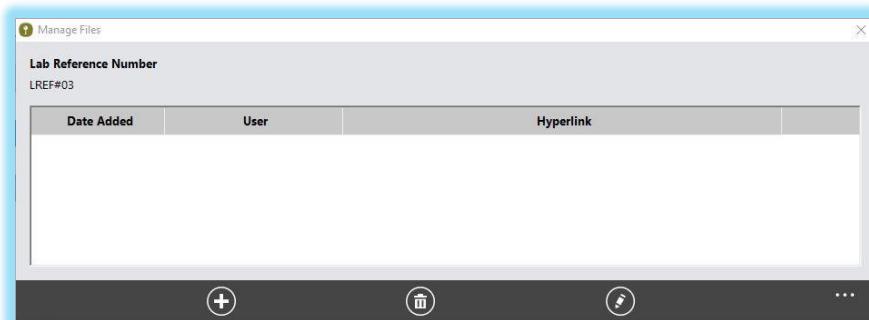
The Edit button can be used to modify the comments or action taken for individual samples.



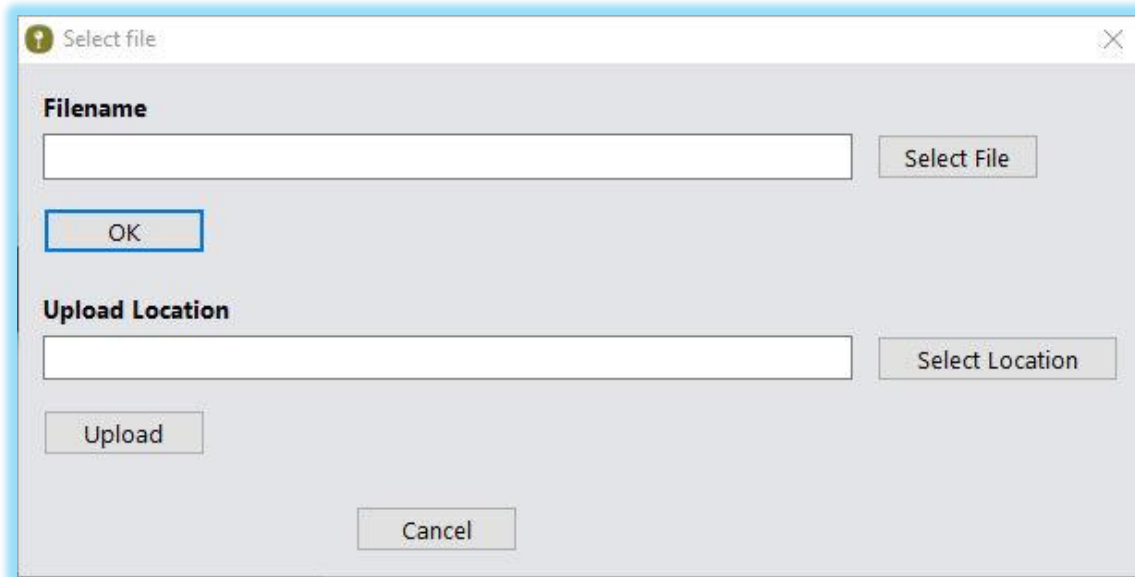
- The window will open with the Action Taken and Comments pre-populated if only one sample is selected.
- The window will open with the Comments pre-populated if more than one sample is selected and all samples have the same comments.
- The “More >>” button can be clicked to expand the window to view the samples that are selected, along with the current Action Taken and Comments values.
- If the Action Taken is left blank (unchanged) then the current value will remain in place (unchanged).



The Attach File button is used to associate a file (eg. Laboratory failure document) with a Lab Reference Number via hyperlink.



*Window that opens to manage the files that have been added to a Lab Reference Number via hyperlink.*



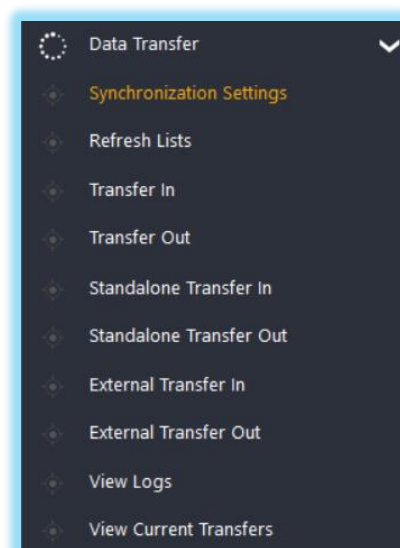
- This window opens after clicking the **Add** button from the previous *Manage Files* window.
- Use the **Select File** button to pick the file to be associated with the Lab Reference Number.
- Clicking **OK** will create a hyperlink to the file.
- Use the **Select Location** button to pick a location (eg. a shared folder on the network) for the file to be moved, so that all users can view the file.
- Clicking the **Upload** button will copy the file and edit the filename / hyperlink to point to the new location.

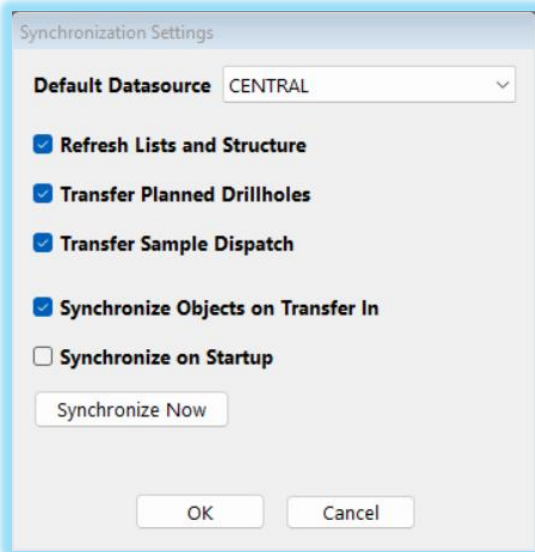
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## DATA TRANSFER

### SYNCHRONIZATION SETTINGS

Open the Synchronization Settings configuration window by clicking the **Data Transfer > Synchronization Settings** menu.





**Default Datasource:** choose the DSN to be used as the source for the synchronization listed below. It will also be used as the DSN (along with Local) for **Quick Transfer** actions.

The ability to control which actions occur during Synchronization is available with checkboxes for the following items:

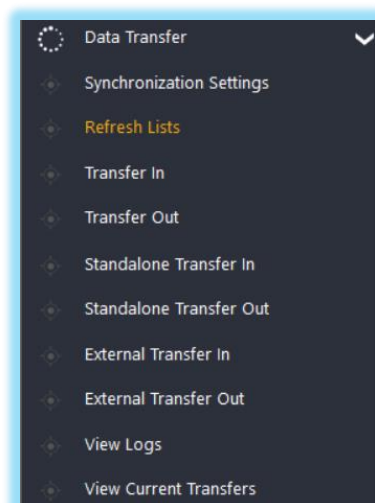
- Refresh Lists and Structure
- Transfer Planned Drillholes
- Transfer Sample Dispatch

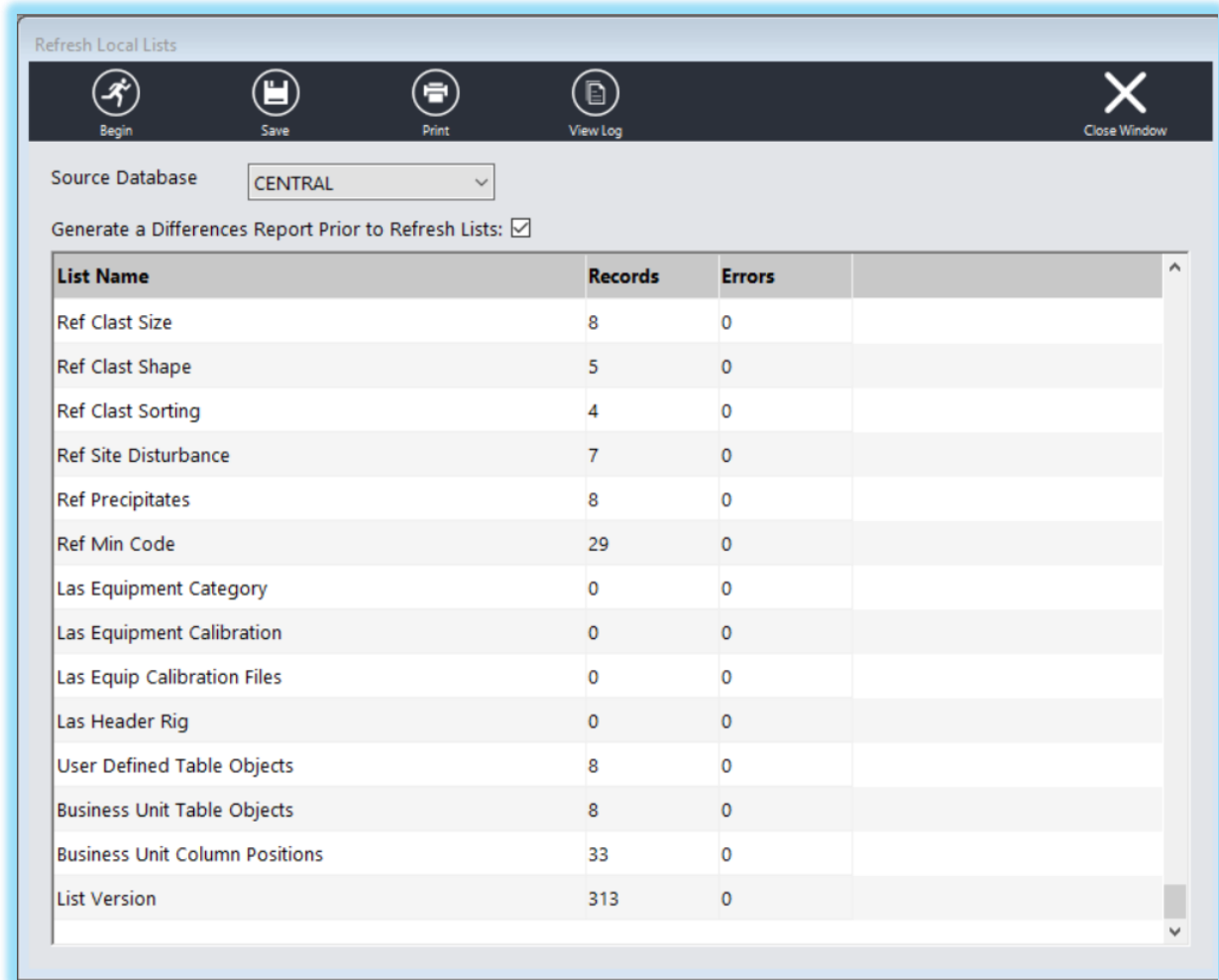
There is also the ability to control, with the **Synchronize Objects on Transfer In** and **Synchronize on Startup** checkboxes, whether the sync will happen during the Transfer In process and/or when Sample Station is started.

Additionally, there is a **Synchronize Now** button that can be used to immediately execute the actions that are checked (enabled).

## REFRESH LISTS

To ensure that all lists are current, a manual Refresh Lists of all lists (not just those that have been identified as changed) can be initiated by clicking the **Data Transfer > Refresh Lists** menu.



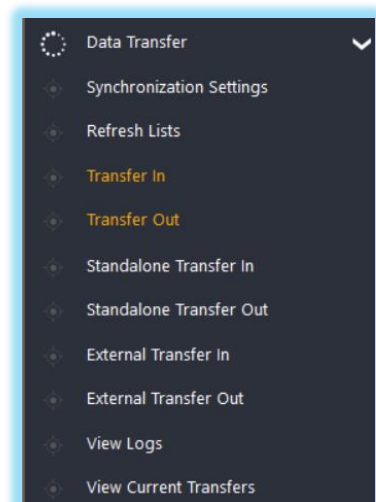


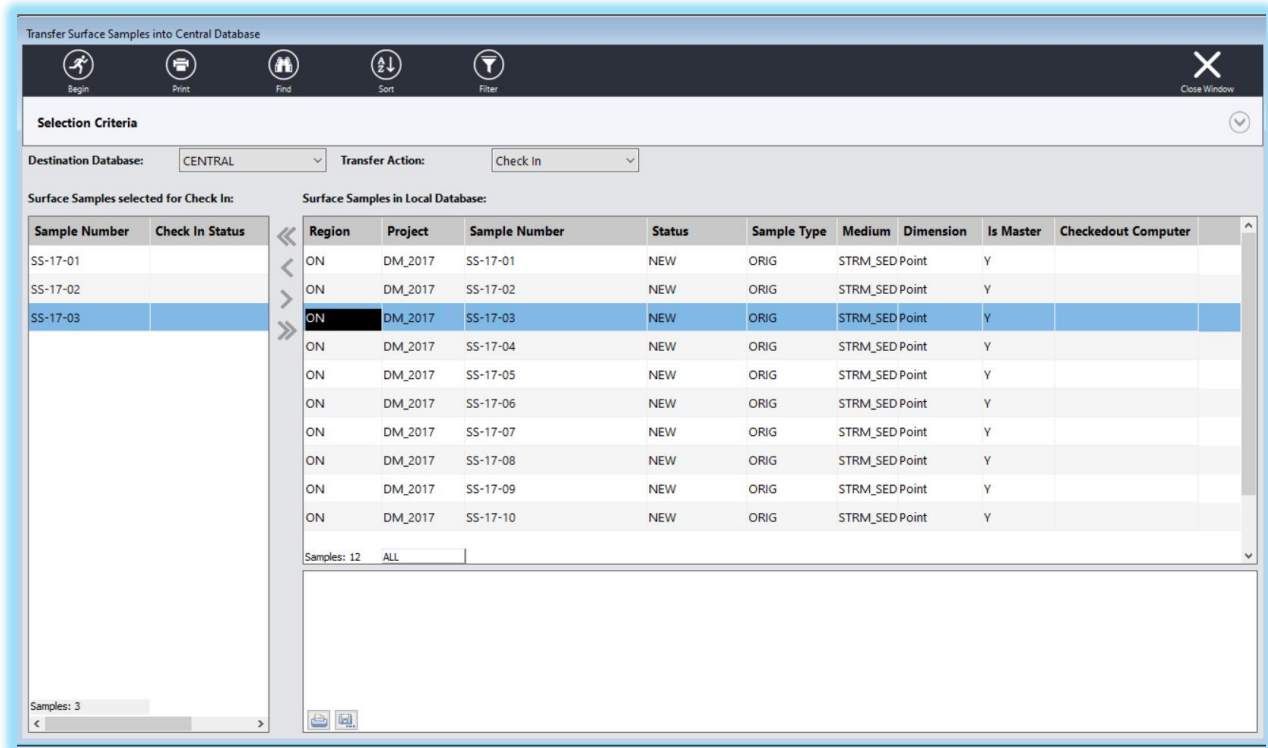
**Source Database:** choose the datasource from which to refresh lists

**Generate a Differences Report:** an option to query the databases to determine which tables have differences.

### TRANSFER IN, TRANSFER OUT

Open the Transfer In and Transfer Out windows by clicking the appropriate items under the **Data Transfer** menu.





*Transfer In window*

The **Transfer In** window allows you to select the **Destination Database**. The picklist varies depending on the current database that you are logged into: Local – list shows Central and FusionRemote if it exists; FusionRemote – list shows only Central

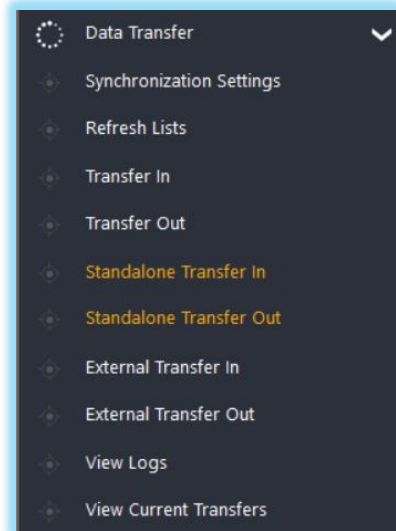
There is also a picklist for the **Transfer Action** which gives the options of Check In or Copy In.

The **Transfer Out** window allows you to select the **Source Database**. The picklist varies depending on the current database that you are logged into: Local – list shows Central and FusionRemote, if it exists; FusionRemote – list shows only Central.

There is also a picklist for the **Transfer Action** which gives the option of Check Out or Copy Out.

## STANDALONE TRANSFER IN, STANDALONE TRANSFER OUT

Open the Standalone Transfer In and Standalone Transfer Out windows by clicking the appropriate items under the **Data Transfer** menu.



Transfer Standalone data into Central Database

Begin Print Find Sort Filter Close Window

**Selection Criteria**    **Standalone Table:**

Retrieve all on open

**Destination Database:**     **Transfer Action:**

**Standalone rows selected for Check In:**    **Standalone records in Local Database:**

User Name	Check In Status	User Name	First Name	Last Name	Date Created
		jsmith	John	Smith	2021-06-01
		djones	Davy	Jones	2021-05-01

Standalone: 0

*Standalone Transfer In window*



The **Standalone Transfer In** window requires you to select the **Standalone Table** from which you will be selecting individual records to transfer. If the chosen table is a Parent table, then all associated records in each of its Child tables will also be transferred.

There is a **Destination Database** picklist with contents that vary depending on the current database that you are logged into: Local – list shows Central and FusionRemote if it exists; FusionRemote – list shows only Central.

There is also a picklist for the **Transfer Action** which gives the options of Check In or Copy In.

The **Standalone Transfer Out** window requires the selection of a **Table** from which individual records can be selected.

This window allows you to select the **Source Database**. The picklist varies depending on the current database that you are logged into: Local – list shows Central and FusionRemote, if it exists; FusionRemote – list shows only Central.

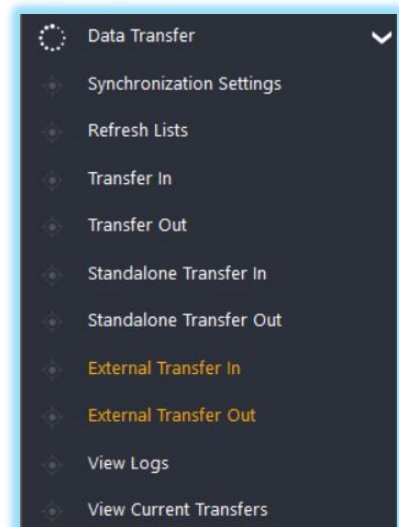
There is also a picklist for the **Transfer Action** which gives the option of Check Out or Copy Out.

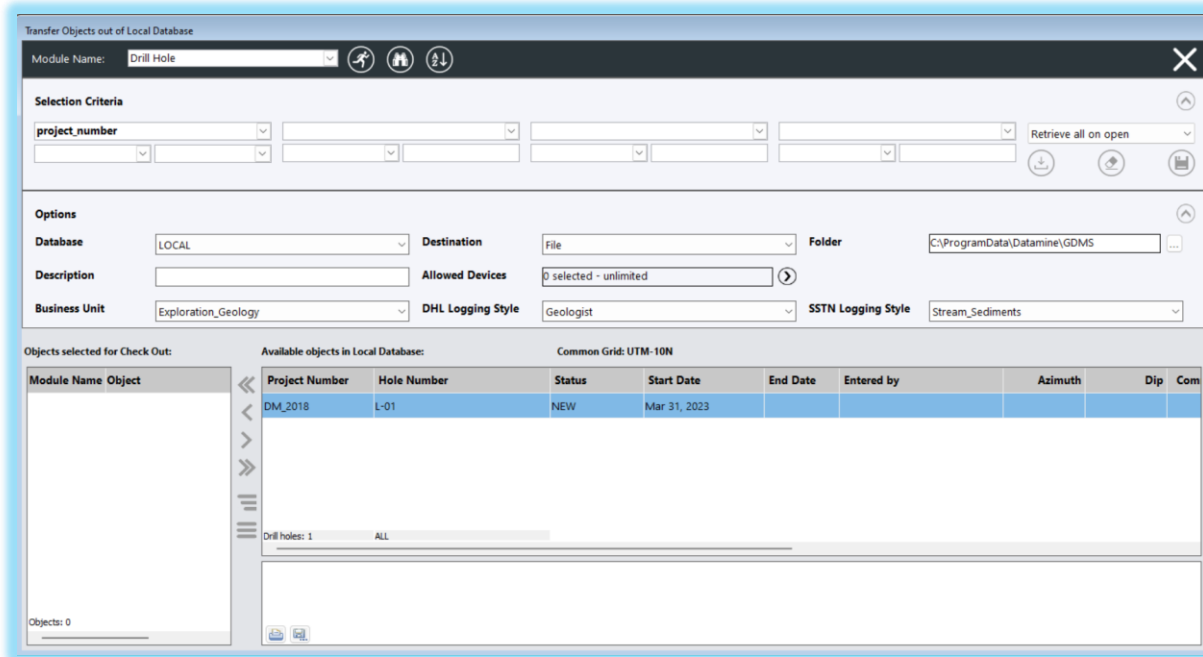
### EXTERNAL TRANSFER IN, EXTERNAL TRANSFER OUT

External Transfer In and Out windows allow you to transfer data to and from external applications. The current formatting is compatible with the Datamine QuickLogger application.

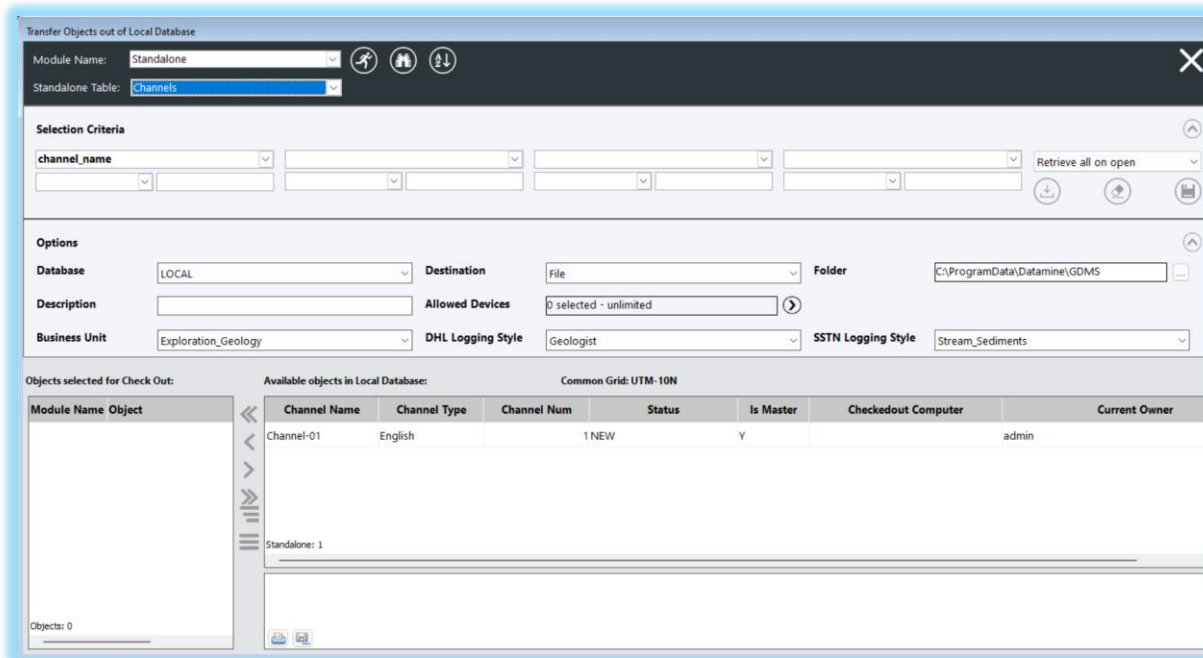
Data in SampleStation can be transferred to QuickLogger with the help of the “External Transfer Out” window and it can be imported back to SampleStation with the help of the “External Transfer In” window.

Open the **External Transfer In** and **External Transfer Out** windows by clicking the appropriate items under the **Data Transfer** menu. These windows are accessible against the Local and FusionRemote databases.





External Transfer Out window – Drill Holes



External Transfer Out window - Standalone Tables

**External Transfer out** window allows you to select the type of data you want to transfer out of Fusion. The records that are transferred receive a status of “External” in the database and become non-editable in Fusion.

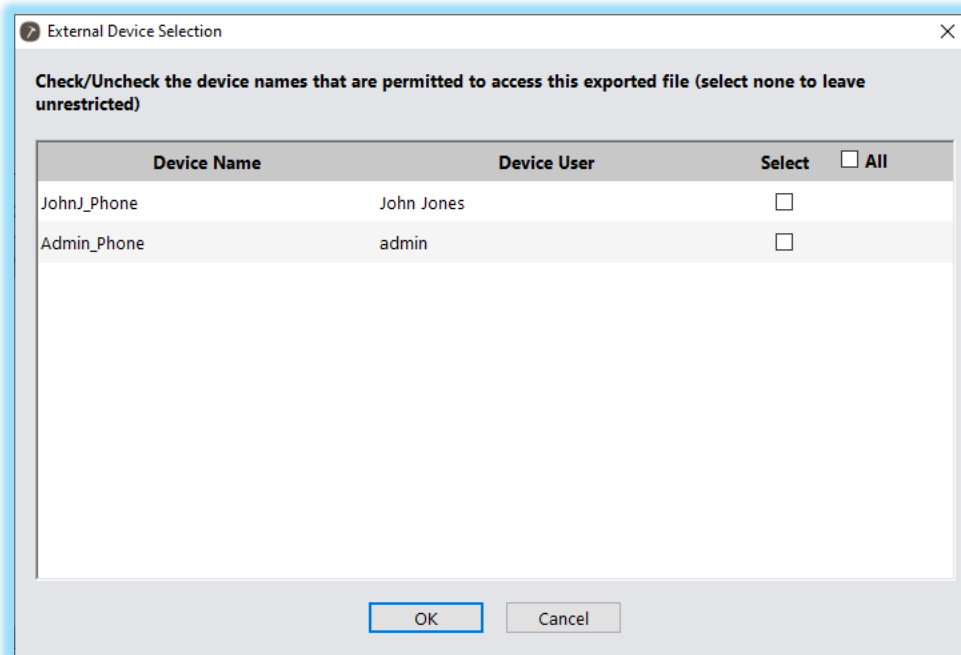
**Module Name** picklist provides the option to transfer data from either Drill Hole or Standalone module.

If the Standalone module is selected, you then choose a **Standalone Table**, from which you can select the individual rows to export (related table records will also be transferred). NOTE: the list is limited to Standalone Tables that have had a key added for them in Fusion Administration.

**Destination** picklist allows you to select *File*, where you then choose the **Folder** that determines where the exported structure/data will be saved as a JSON-formatted file.

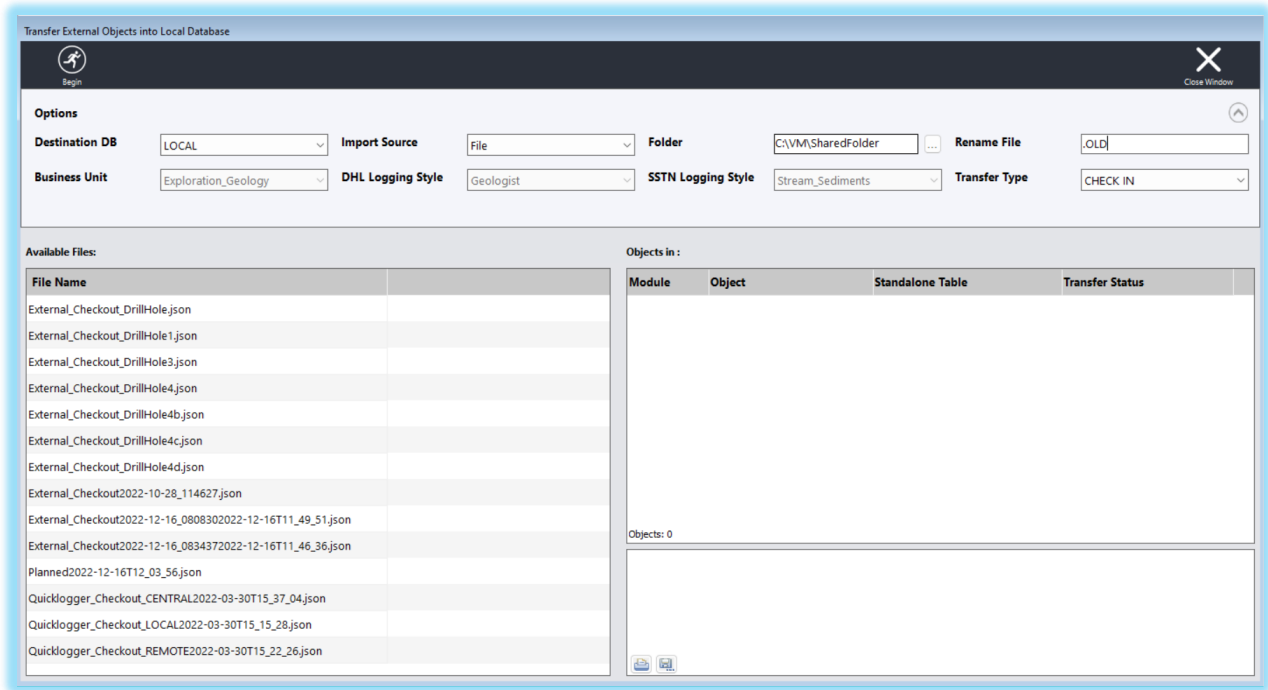
Alternatively, the destination can be *Database*. The exported data will be stored in the External\_Transfer table where it will then be visible in the QuickLogger app as a workfile with the provided **Description** which is available to be imported.

**Allowed Devices** displays a count of the number of the devices that have been selected to have permission to access this JSON file through QuickLogger import. If no specific devices are chosen, then the file is unrestricted and the file can be imported on any device. Device selection is performed by hitting the arrow ( > ) button, and choosing from the licensed device list.



**Business Unit, DHL Logging Style, SSTN Logging Style** picklists determine the structure (and data) that will be exported from the database.

If no objects are selected and the Begin button is clicked, an export file is still created, however it will only contain the database structure and reference lists that are accessible by the chosen Business Unit and Logging Styles.



*External Transfer In window*

**External Transfer In** window allows you to import data for drill holes, surface samples and standalone tables. Data exported from the QuickLogger app can be imported to Fusion with the help of this window.

**Destination DB** picklist allows you to specify the destination for the imported data.

**Import Source** picklist allows you to select *File*, where you then choose the **Folder** that contains the JSON files available for import, and allows you to provide an extension to **Rename File** following a successful import.

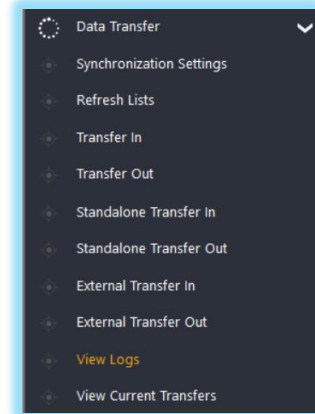
Alternatively, the source can be *Database*. This source will provide a list of Available Files from the connected database that have been inserted to the External\_Transfer table from QuickLogger and the webservice. The list contents may also be filtered based on the current user and the active business unit. An enhanced profile (EXTERNAL IMPORT ADMINISTRATOR) may also impact the visible file.

**Business Unit, DHL Logging Style, SSTN Logging Style** picklists are not editable and reflect the properties of the chosen file. They default to the current user's active settings until a file is selected.

**Transfer Type** picklist allows you to specify Check In or Copy In.

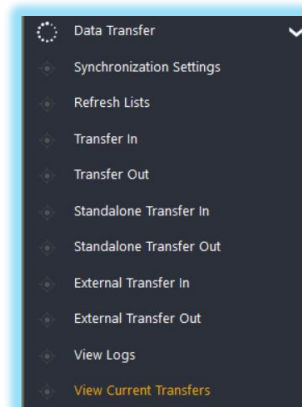
### VIEW LOGS

A window that shows the logs from recent transfers can be accessed by clicking the **Data Transfer** menu.



### VIEW CURRENT TRANSFERS

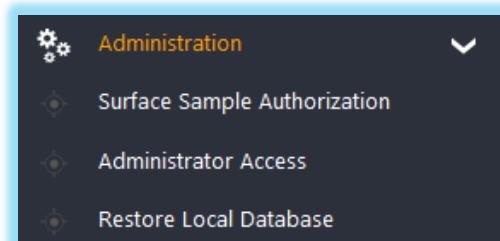
A slideout will appear that shows the status of the current transfer when clicking the **Data Transfer > View Current Transfers** menu item.




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## ADMINISTRATION

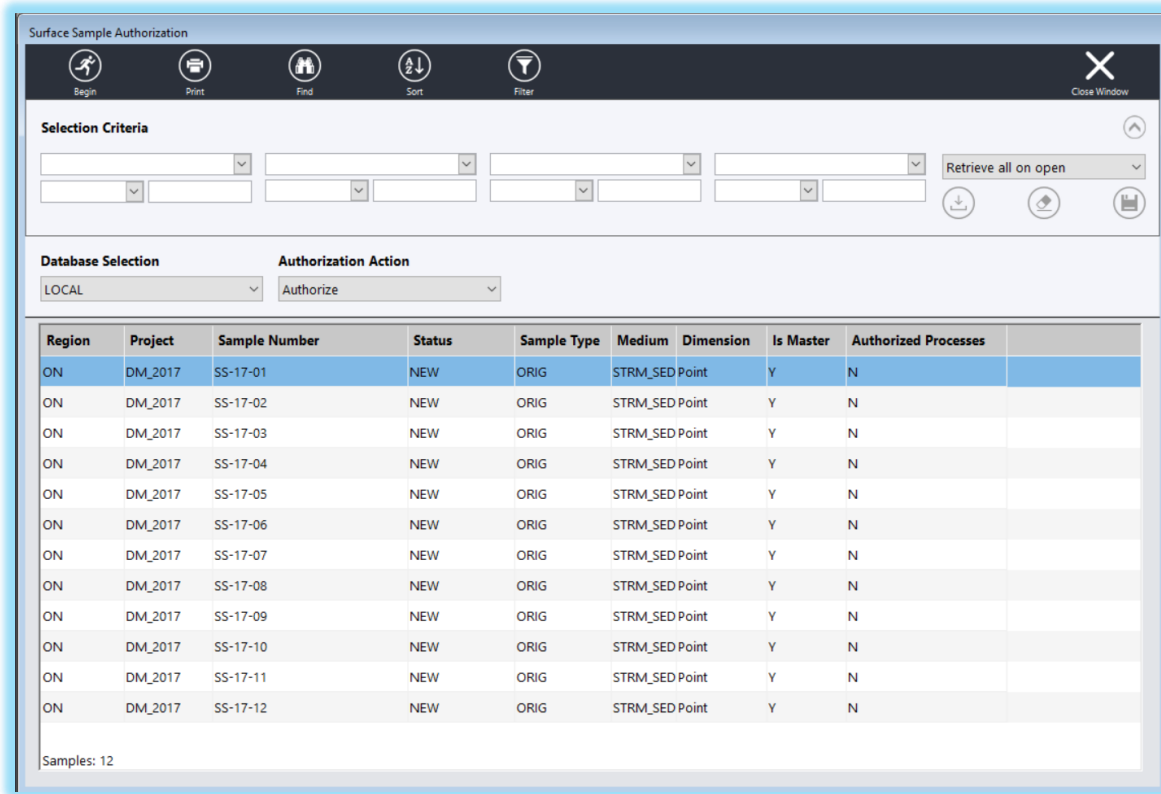
There are several windows within Sample Stations that allow users to perform some administrative duties.



### SURFACE SAMPLE AUTHORIZATION

This module allows you to finalize and sign-off on the surface sample data. If configured, validation rules are executed to confirm that required data exists, that the logged data meets specific business rules, and that the surface sample is ready to be Authorized. The status of the sample will be changed, and it essentially becomes 'Read Only', preventing further editing. If changes need to be made to the surface sample, it can be Reopened from this same window with a change to the Authorization Action.

**NOTE:** The user must be granted the CERTIFIED\_PERSON profile in Fusion Administrator in order to see this menu item.



Region	Project	Sample Number	Status	Sample Type	Medium	Dimension	Is Master	Authorized Processes
ON	DM_2017	SS-17-01	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-02	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-03	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-04	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-05	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-06	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-07	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-08	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-09	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-10	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-11	NEW	ORIG	STRM_SED Point	Y	N	
ON	DM_2017	SS-17-12	NEW	ORIG	STRM_SED Point	Y	N	

### ADMINISTRATOR ACCESS

From this window, an Administrator can modify the Original Creator, Current Owner, Status and Is Master values for surface samples. Since these are fields that are typically handled by the application itself depending on the actions taken on the surface sample, it is critically important that the Administrator understand the consequences of their changes, and ensure that status changes in one database are properly considered for versions of the same samples in other databases (so that one doesn't end up with multiple 'master' versions of the same surface sample).

NOTE: In order to see this menu item, either the ADMINISTRATOR profile or Role\_Century\_Admin granted to your user.

Administrator Access

Save Print Find Sort Filter Previous Page Next Page Close Window

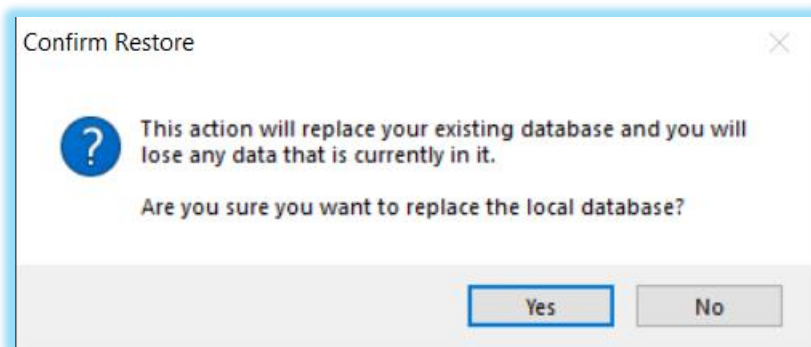
Selection Criteria

Database Selection LOCAL

Project	Region	Sample Number	Current Owner	Status	Is Master	Checkedout Computer
DM_2017	ON	SS-17-01	admin	NEW	Y	
DM_2017	ON	SS-17-02	admin	NEW	Y	
DM_2017	ON	SS-17-03	admin	NEW	Y	
DM_2017	ON	SS-17-04	admin	NEW	Y	
DM_2017	ON	SS-17-05	admin	NEW	Y	
DM_2017	ON	SS-17-06	admin	NEW	Y	
DM_2017	ON	SS-17-07	admin	NEW	Y	
DM_2017	ON	SS-17-08	admin	NEW	Y	
DM_2017	ON	SS-17-09	admin	NEW	Y	
DM_2017	ON	SS-17-10	admin	NEW	Y	
DM_2017	ON	SS-17-11	admin	NEW	Y	
DM_2017	ON	SS-17-12	admin	NEW	Y	

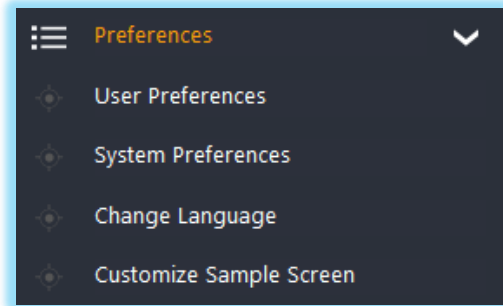
### RESTORE LOCAL DATABASE

This menu item is available only to the 'admin' user, and it will replace your Local Database with one that exists in the database of your choosing. Below is the confirmation message shown when selecting this action.



## PREFERENCES

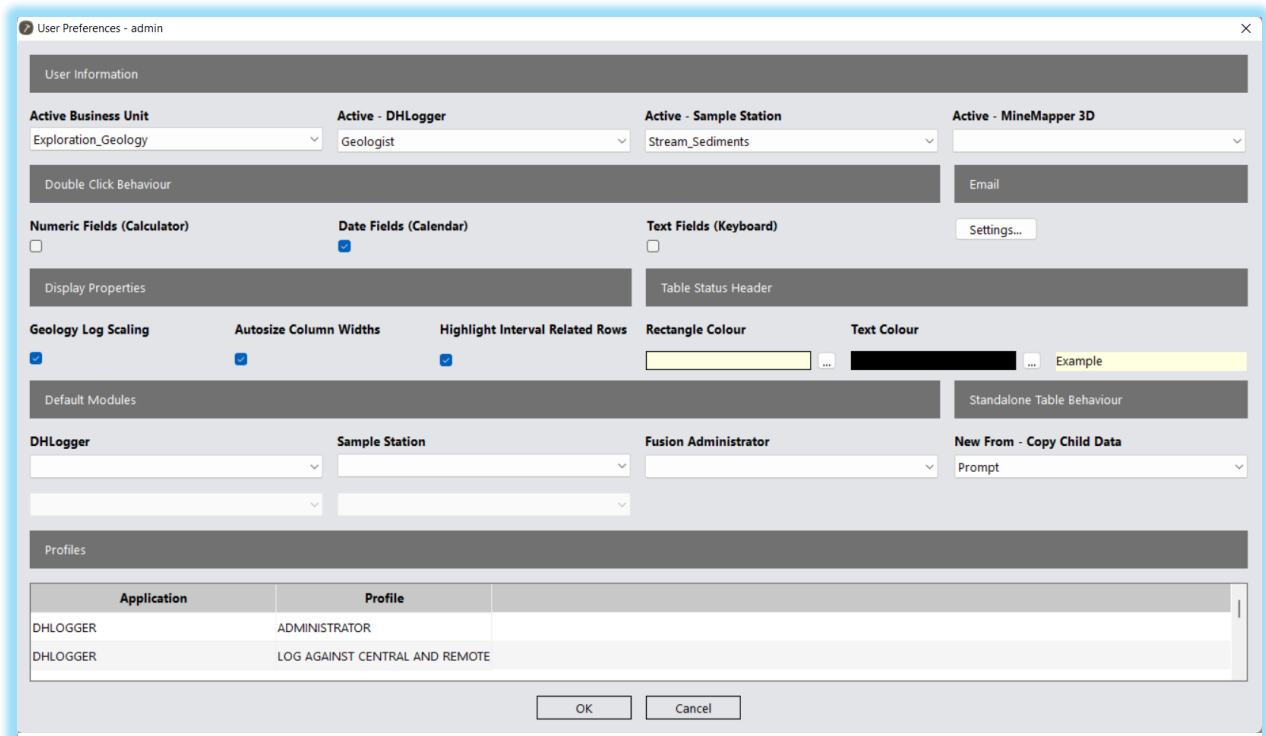
There are several windows within Sample Station that maintain preferences for various parts of the application.



## USER PREFERENCES

The User Preferences window allows the user to specify their active business unit and logging styles, mouse behavior in Surface Samples, default modules when starting the applications and general email settings for email notifications.

The User Preferences window is available from the **Preferences > User Preferences** menu.





### User Information

- **Active Business Unit:** This is the business unit used by DHLogger for the current user if multiple business units are assigned to the user.
- **Active - DHLogger:** The active logging style used by DHLogger for the current user if multiple logging styles are assigned to the user.
- **Active - Sample Station:** The active logging style used by Sample Station for the current user if multiple logging styles are assigned to the user.
- **Active MineMapper 3D:** The active logging style used by MineMapper 3D for the current user if multiple logging styles are assigned to the user.

### Double Click Behaviour

- This section identifies if the calculator, calendar, or keyboard is displayed when the user double clicks each of the different field types.

### Email

- Settings button to define email settings for email notifications within DHLogger.

### Display Properties

- **Tabs on Multiple Lines:** checkbox, when enabled, the tabs in the Surface Sample window (and DHLogger's Drill Hole folder) will display on multiple lines. When disabled, the tabs are in one line and may require scrolling to access all tabs
- **Autosize Column Widths:** Autosizes the column widths in each grid style window to adjust to the size of the data in the field

### Table Status Header

- Settings to configure the appearance of the header that displays the table's status in DHLogger's Drill Hole Folder

### Default Modules

- Defines the default module to open automatically when the specified application starts up.

### Standalone Table Behaviour

- **New From - Copy Child Data** defines how to process the child data during a 'New From' action on a parent standalone record: ALWAYS copy, NEVER copy, or PROMPT for user decision
- **NOTE:** Modular Samples will not be copied, since they must be unique in the database

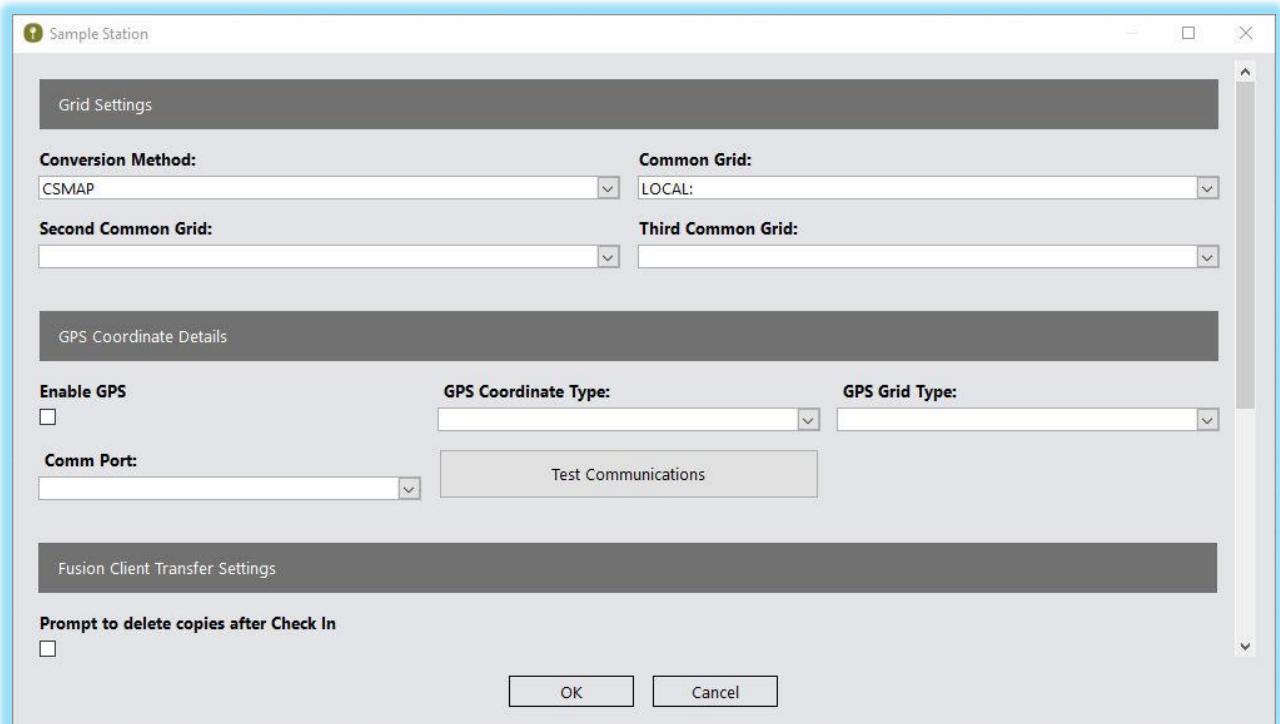
### Profiles

- A visual list of profiles currently assigned to the logged in user.

## SYSTEM PREFERENCES

The System Preferences window allows the user to specify program and file locations, default values or the appearance of data entry forms among other things.

The System Preferences window is available from the **Preferences > System Preferences** menu.



The screenshot shows the 'Sample Station' System Preferences dialog box. It is organized into several sections:

- Grid Settings:**
  - Conversion Method:** A dropdown menu with 'CSMAP' selected.
  - Common Grid:** A dropdown menu with 'LOCAL:' selected.
  - Second Common Grid:** An empty dropdown menu.
  - Third Common Grid:** An empty dropdown menu.
- GPS Coordinate Details:**
  - Enable GPS:** An unchecked checkbox.
  - GPS Coordinate Type:** An empty dropdown menu.
  - GPS Grid Type:** An empty dropdown menu.
  - Comm Port:** An empty dropdown menu.
  - Test Communications:** A button.
- Fusion Client Transfer Settings:**
  - Prompt to delete copies after Check In:** An unchecked checkbox.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

### Grid Settings

- **Conversion Method:** indicates the default survey grid conversion method that will be used when converting coordinates between two different Grid Types: CSMAP and CENTURY. Not allowed to be changed in the Local database, Central only.
- **Common Grid, Second Common Grid, Third Common Grid:** the default Primary, Secondary and Tertiary grid type (ie. LAT/LONG, UTM) used for coordinates, from values defined in 'Grid\_Type' reference list

### GPS Coordinate Details

- **Enable GPS:** when enabled, the ability to add location (coordinate) information directly from a GPS is enabled -- a button appears in the Location tab.
- **GPS Coordinate Type:** from a picklist, the default coordinate type code for the GPS coordinate
- **GPS Grid Type:** from a picklist, the default grid type code for the GPS coordinate
- **Comm Port:** from a dropdown (COM1: to COM20:), indicates the port that the GPS device is using
- **Test Communications** a button to test the GPS device is working properly

### Fusion Client Transfer Settings

- **Prompt to delete copies after Check In:** with this setting enabled, following a Check In of Surface Samples, the user will be prompted to delete the copies of the Surface Samples from their Local database

### Lab Import Defaults

- **Preview Sample Type:** when enabled, a window will be displayed that shows the sample type (and standard code) of each sample being imported
- **Allow Results to be Overwritten (LIMSAPI setting):** a setting applicable to LIMSAPI only, that will allow analytical results to be updated (overwritten) during import with LIMSAPI
- **Check Dispatch:** with this enabled, validations of the Dispatch Number will occur in Lab Import (eg. correct status, samples belong, missing sample)
- **Update Sample Dispatch Copies:** if enabled, sample dispatch information will be updated in 'copies' of the sample dispatch records when importing into a database other than the Central, and records will be flagged to update the Central when Fusion Client is next started against the Central database

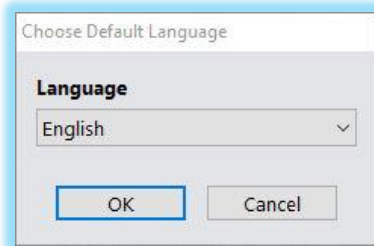
### Surface Sample Updates

- **Automatically check for newer copies of Surface Samples:** when this feature is enabled, when Sample Station is started, the application will check to see if a newer version of any surface sample copies exist in the Central Database (if available) and provides a report to the user

### CHANGE LANGUAGE

Changing the language in one application will affect the language, on the user’s machine, in all the GDMS applications (Sample Station, DHLogger, Fusion Administrator).

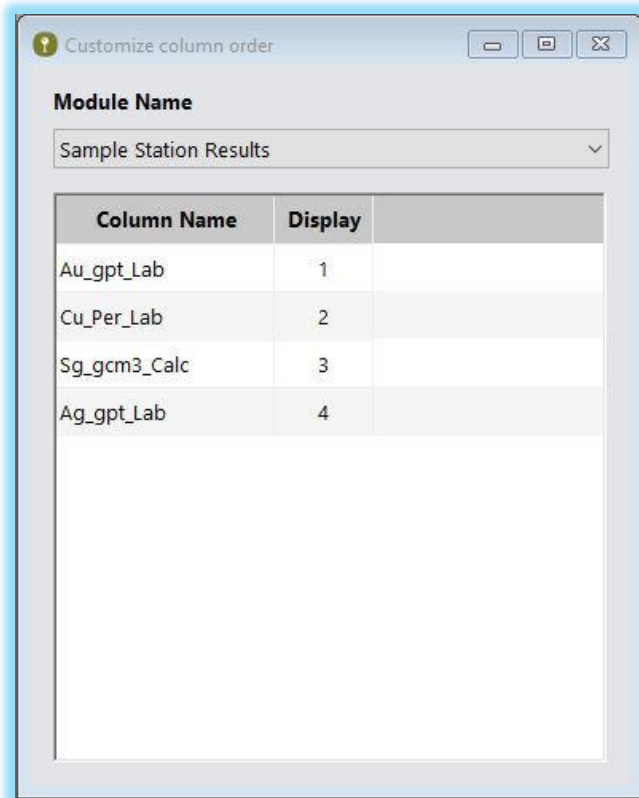
The Change Language window is available from the **Preferences > Change Language** menu.



### CUSTOMIZE YOUR ASSAY SCREEN

From this window you can drag and drop the sample columns into the order desired. Alternatively, you can manually enter a display order number, where 0 implies not visible.

This window is accessible from the **Preferences > Customize your Assay Screen** menu.



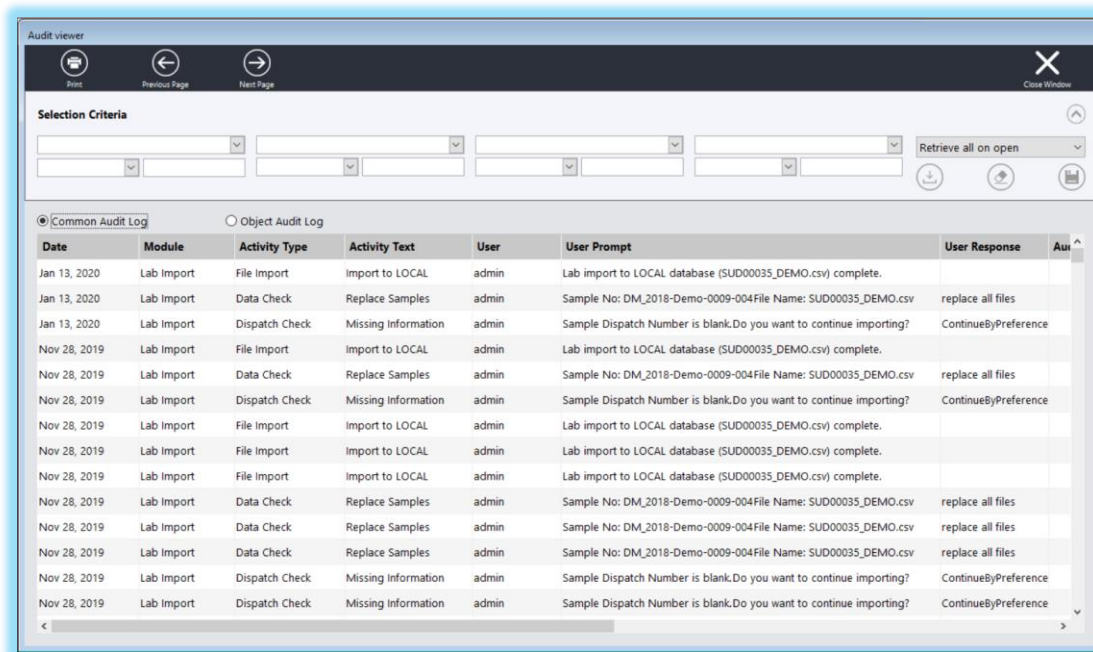
## OTHER OPTIONS

There are several utilities within Sample Station described in the section that follows.

### PRINTER SETUP

A quick window to select the default printer.

### AUDIT LOG



This window, accessible from the **Other Options > Audit Log** menu, allows you to view an audit trail (record) of certain activities.

There are two categories of audit logging, which is stored in two different database tables:

- Common Audit Log, which tracks user decisions during Lab Import (continue with import despite warnings), Batch Authorization (status changes), Deletion of data (drillholes or surface samples), Authorizing data (drillholes, surface samples, processes)
- Object Audit Log, which tracks data changes, including old and new values, in objects that have been re-opened

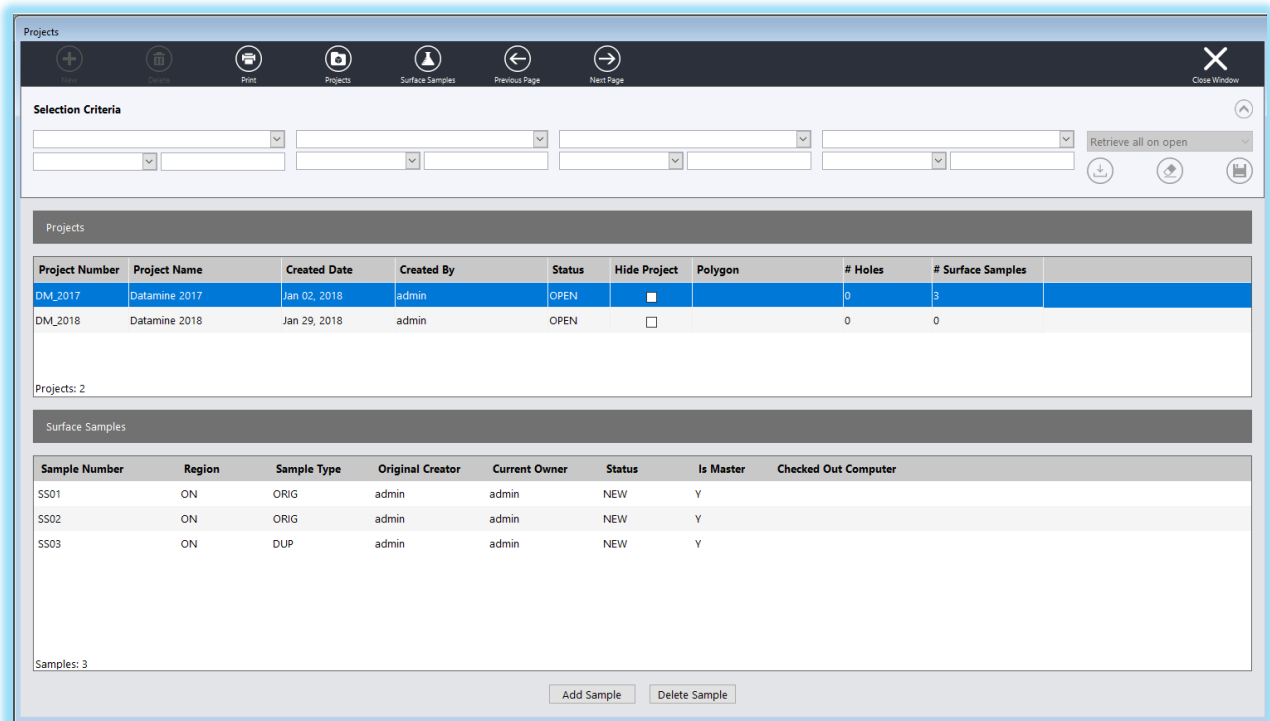
Selection Criteria has been added to this window to assist with retrieval of the information that is most pertinent.

## PROJECTS

Projects are used to group database records according to specific criteria. For example, a project may encompass all surface samples logged by a company in an entire country. Conversely, it may encompass as little as a few surface samples on a mine sublevel. Normally however, projects are set up to correspond to a mine property.

The Project window can be used for maintaining project records and surface samples. The Surface Sample window should be used to access the detailed surface sample information.

The Project window can be accessed under the **Other Options > Projects** menu.



The list of projects can be filtered by clicking on the Projects menu item to open a Filter Editor window.



The list of samples can be filtered by clicking on the Samples menu item to open a Filter Editor window.

Add Sample

Adding samples can also be performed from the Projects window by selecting a project and then clicking the Add Sample button.

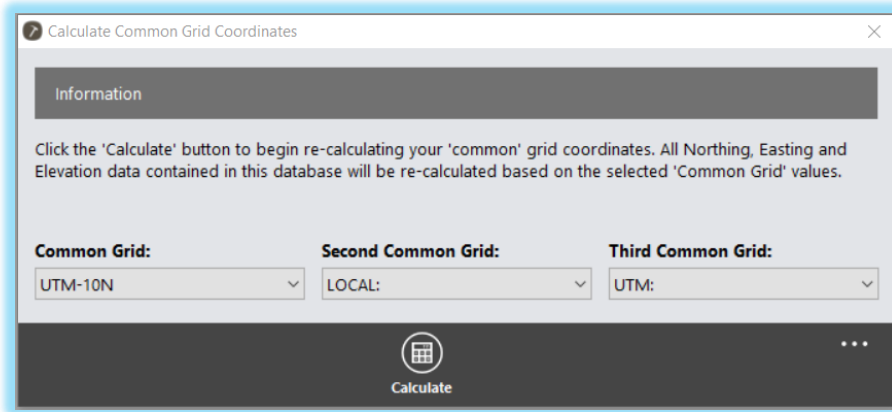
Delete Sample

To remove samples from the database, select a project, highlight one or more samples and click the Delete Sample button.

When deleting master versions of surface samples, you may be prompted to provide a reason for the delete of the object. The reason is chosen from a picklist that has been previously configured (Object Audit Codes).

## CALCULATE COMMON COORDINATES

Convert all the coordinates from their original grid to the common grid(s) from this window.

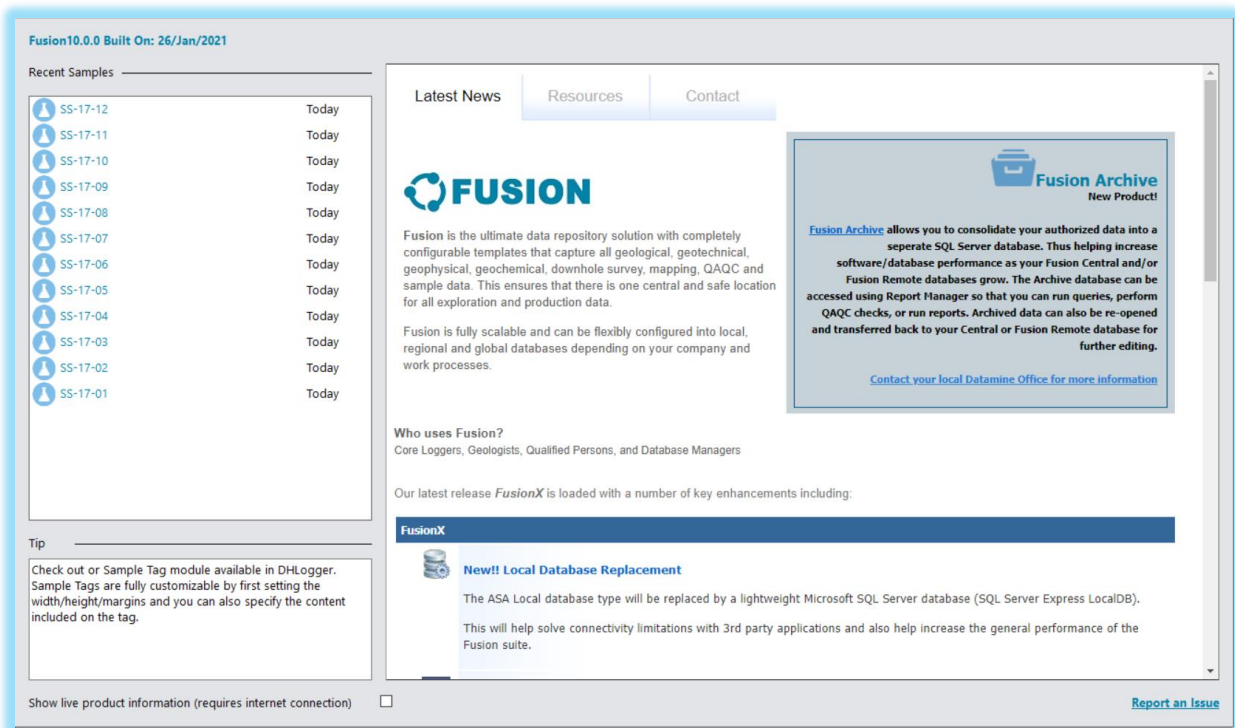


## HELP ABOUT

Indicates the version, database version, build date and copyright information.

## LATEST NEWS

The new landing page in Sample Station, opens by default when the application starts, but can be overwritten in User Preferences in the Default Module picklist. This Latest News page can also be viewed from the menu item. It contains a jump-point to recently updated surface samples, a tips section, and a link to the latest Fusion news from Datamine Software.



## CENTRAL DATABASE UTILITIES

The following are utilities that are accessible in Sample Station when connected to the Central database.

### RESET SAMPLE RESULTS

This utility is for clearing the assay results for Global and Size Fraction samples. Doing this reset will allow for a re-import of results that otherwise would be prevented when the “results\_received” flag has been set to “Y”.

Accessed from the **Sample Analysis > Reset Sample Results** menu.

### ORIGINAL BUSINESS UNIT MAINTENANCE

This window is used to set or modify the Original Business Unit.

The original business unit is used during the opening of a surface sample when comparing the user’s current business unit with the original business unit. When the surface sample is initially created, and data is entered, a set of business rules is used to validate the data being entered. If you then open the surface sample with a different business unit, and attempt a save, there is the potential that the current business unit has different rules for validation, which may cause errors.

A second usage of the original business unit is determining whether the data can be checked out (shared) with other business units. There is an option in the Business Unit window and a setting in the DHLogger.INI file that prevents users from other business units from checking out surface samples created in a business unit that does not allow sharing.

Accessed from the **Administration > Original Business Unit Maintenance** menu.

### METAL PRICES

This window maintains a list for metal prices - storing the price, date and source.

Accessed from the **Sample Analysis > Reset Sample Results** menu.

### INVOICES

This is a simple Invoice module used to keep track of sampling costs. In addition to data entry screens, there is a Report Viewer that contains some standard reports: Lab Invoice Report, Lab Total Costs, Lab Turn Around.

Accessed from the **Other Options > Invoices** menu.