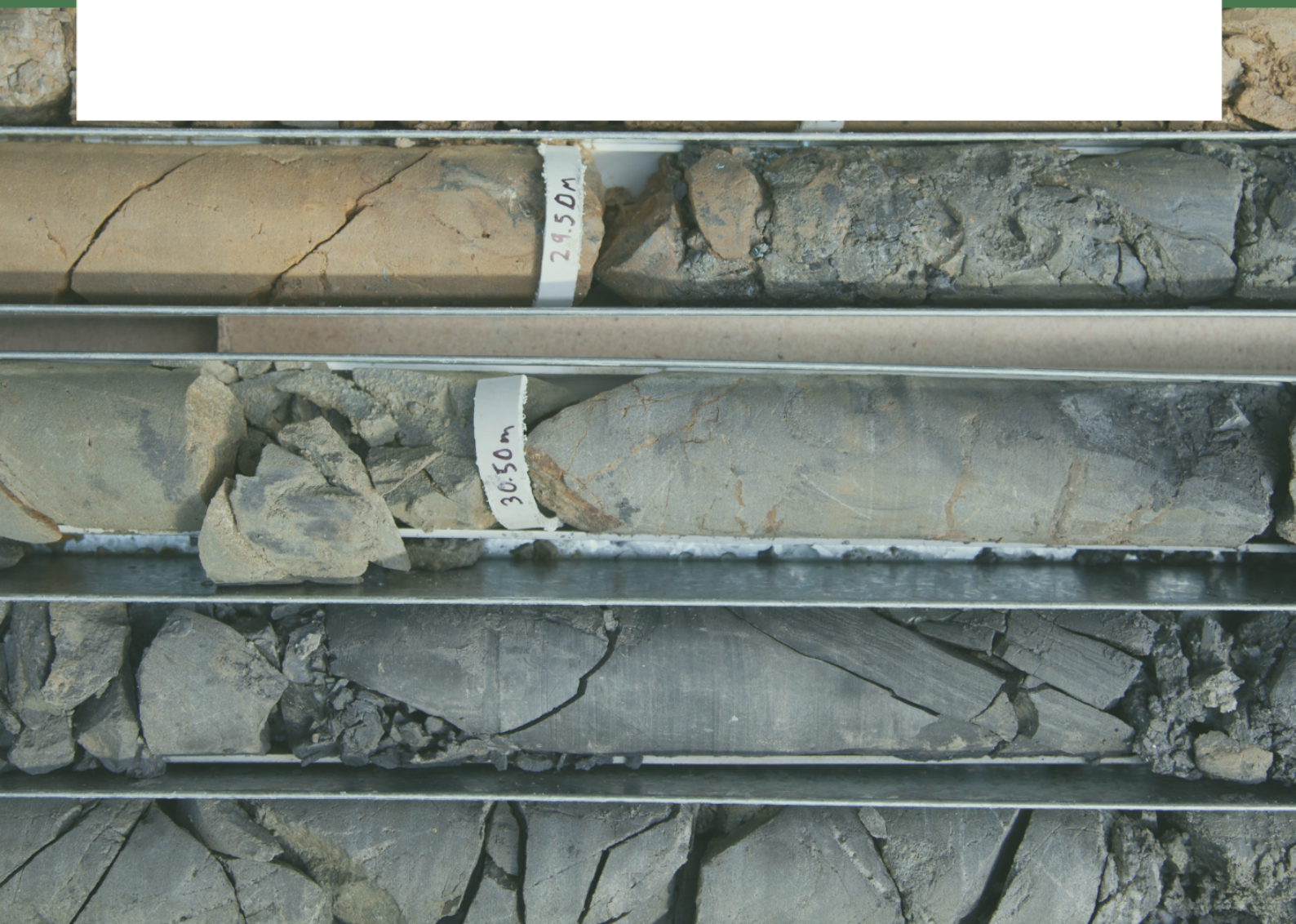
DATAMINE

FUSION

Fusion X

Release Notes



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Overview

Fusion is a comprehensive geological database management system tailored for mining and exploration projects with a focus on drilling and sample data. It integrates multiple data sources, ensuring accurate and efficient data handling with features like centralized data management, QA/QC checks, robust security and governance, advanced analytics, and automated processing. Fusion, through its unique mobile, local and central architecture, supports remote work and collaboration, enforcing business rules with real-time data validation. Its scalable and customizable platform offers a simple, intuitive interface for capturing, managing, and reporting geological data. Fusion addresses the complexity of reliably and securely managing large volumes of diverse raw geological data, ensuring data quality and regulatory compliance.

Further Information

This document includes cumulative release notes for Fusion X.

Release notes for other versions of Fusion are available via the Support Portal https://www.dataminesoftware.com/support/.

Documentation

HTML documentation for Fusion Administrator is available online at https://docs.dataminesoftware.com/Fusion/index.htm.

FusionX Service Pack 4.4 (May 2025)

Enhancements

- **GDMS-10685 and GDMS-10555** Performance improvements have been made to the **Batch Authorization** module in **DHLogger**.

Defect Fixes

- **GDMS-10737** An issue was resolved in DHLogger where generating QC samples could fail if multiple custom columns were using the Inherit Values feature. The process now correctly handles inherited values across multiple custom columns, ensuring reliable QC sample generation.
- **GDMS-10732** An issue was identified where the full geology log was not displaying correctly in the **Sample** screen while logging data. This has been resolved by addressing the underlying display problem in the geology log component to ensure all logged information is now visible.
- **GDMS-10677** An issue was identified where sample IDs were missing from the **All Imported Results** tab in the **Batch Authorization** module when assays were imported via the API. This has been resolved to ensure all imported assay results are correctly displayed, regardless of the import method used.
- **GDMS-10672** A display issue affecting the visibility of sub-storage locations in **Core Shed** has been resolved.
- **GDMS-10626** An issue in **Core Shed** was resolved where core samples could not be moved between **Storage Facilities**, **Storage Units**, or **Bays**.
- **GDMS-10603** An import validation issue in **Core Shed** was resolved where core boxes were allowed to exceed the capacity of a bay.

FusionX Service Pack 4.3 (December 2024)

Defect Fixes

- **GDMS-8815** Planned Drill Holes - Slow Calculation of Common Coordinates

  Calculating common coordinates for a large number of planned drill holes resulted in slow performance. The calculation process has been optimized, ensuring improved responsiveness when handling extensive datasets.

- **GDMS-10339** QuickLogger - Validation Message Error

  Users encountered a persistent "Validation in progress. Please try again" message when logging a new record in the QuickLogger standalone table. This issue has been resolved, enabling seamless record logging without validation interruptions.

- **GDMS-10616** DHLogger - Core Photo Module Insert Error

  An error occurred when inserting rows into the DRILL_HOLE_CORE_PHOTOS table due to the use of a comma as a decimal separator. The system now properly handles regional decimal formats, ensuring error-free data insertion.

- **GDMS-10637** Fusion Administrator - Application Crash During Standard Reassessment

  Re-assessing certain standards caused the Fusion Administrator application to crash unexpectedly. This issue has been fixed, and the reassessment process now runs reliably without interruptions.

- **GDMS-10646** DHLogger - Standalone Tables Calculated Value Issue

  Calculated values in standalone tables were not triggered after saving. This behaviour has been corrected, ensuring calculated values update automatically upon saving.

- **GDMS-10654** External Transfer API - Performance Improvement for Drill Hole Sample Processing

  A performance issue was identified when checking in and checking out drill holes, caused by redundant sample counting during the process. Unnecessary database queries have been removed, significantly improving the speed and efficiency of sample processing in the External Transfer API.

FusionX Service Pack 4.2 (January 2024)

Enhancements

- **GDMS-10237** Fusion Administrator has been updated to use the varchar(max) data type when creating new signature columns (Base64 support).
- **GDMS-10238** Updated the Photo control component in DHLogger. Users can now view signatures exported from the QuickLogger app.

Defect Fixes

- **GDMS-10270** Resolved issue identified with “is_Master” flag assignment to standalone table records when exported from QuickLogger.
- **GDMS-10108** A minor issue was identified with the logic used to apply standard vs. business unit validation rules. The cause was identified and the issue has been resolved.
- **GDMS-10092** Resolved general API connectivity issues with QuickLogger.

FusionX Service Pack 4.1 (October 2023)

Enhancements

- **GDMS-10178** The 'Project Access Limited by Business Unit' preference has been extended to Standalone Tables if the user adds "project_number" to a parent (or childless) table. Limited access will apply on the “Transfer In” and “Transfer Out” windows, External Transfer Out window, and in the logging interface for Standalone Tables.
- **GDMS-10011** Implemented a default DATE / DATETIME feature in the QuickLogger app. A default value of “GETDATE()” will be exported when needed.
- **GDMS-10010** A change has been made to the QuickLogger export module. An additional property "INHERIT_VALUES_COLUMN" is exported when a column's "INHERIT_VALUES" property = "Y".
- **GDMS-10118** A new feature has been added to the Administrator Access menu in DHLogger that allows a user to change the "status", "is_master" and "current_owner" fields of Standalone Table records.
- **GDMS-10090** A change has been made to prevent users from adding a column named "sample_number" to Standalone Tables, as this can cause an issue in the QuickLogger app when the standalone group also contains modular_samples.
- **GDMS-10063** A new window is available in DHLogger which allows a user to delete external transfer records from the logged-in database (in the event that a transfer issue is encountered).
- **GDMS-10001** The Business Unit Preferences module has been enhanced to allow for the definition of a column to inherit its values from a column other than itself.
- **GDMS-9781** Introduced the ability to add a Signature in QuickLogger. The signature will be stored as an image data type.
- **GDMS-9780** Added support for formulas that reference columns of different data types in QuickLogger (Numeric, Char, Date, DateTime).
- **GDMS-9763** The QAQC Charts in Report Manager have been enhanced to support modular samples (standalone tables).

- **GDMS-9658** Custom DATE and DATETIME columns can be configured with a default value of 'GetDate()', which will apply a default value of the current date or datetime when the record is created in DHLogger.

Defect Fixes

- **GDMS-10183** A modification was made to the External Transfer Out - Standalone Tables window to ensure the columns in the "Available Objects" list are not editable.
- **GDMS-10140** Clicking on the Crystal Viewer menu option will now redirect and open Report Manager when logged in against the Central or Fusion Remote database with a Windows Authenticated user.
- **GDMS-10027** Modifications have been made to the “External Transfer Out” module such that a Description must be provided. Additionally, a single Allowable Device must be provided when data objects are exported (not required when exporting DB structure only).
- **GDMS-10021** Sample Station was modified to ensure that the user is correctly notified if the window or application cannot close due to validation rule failures. Users will then be required to make the necessary corrections.
- **GDMS-10018** The Silent External Transfer window was modified to ensure messages are properly logged if attempting to trigger an import of a folder that does not contain any valid JSON files.
- **GDMS-9986** The Standalone Tables module was modified to exclude MODULAR_SAMPLES from the table picklist, as it can only be accessed as a child table within a group.
- **GDMS-9983** A change was made to the LAS module in DHLogger to ensure that the "Import Wizard" toolbar button is enabled when creating a new hole against the Central or Remote database.
- **GDMS-9814** Report Manager will be used going forward to load and display the Sample Dispatch report. Additionally, Report Manager will be used to display Crystal Reports from the Bulk Print window in the Report Viewer when the user is “Windows-Authenticated”, and the database is not a Local DB type.
- **GDMS-9254** Resolved issues identified with changing a user’s password within the Fusion Portal. Previously, password policies such as password length were ignored.
- **GDMS-9013** The main Drill Hole Collar window has been updated to ensure that a 'data is not unique' error message is no longer returned when creating a new hole (issue due to validation rule checks).

- **GDMS-10181** A modification to the Lab Import API has been made to ensure that surface sample result column calculations are performed correctly.
- **GDMS-10172** The Calculate Common Coordinates utility was updated to correct an issue with the first conversion when custom formulas are used between grid types.
- **GDMS-10161** An issue was identified with the Batch PDF and Print feature in DHLogger. When selecting the “Central” database from the pick list, only data in the Local database was available for selection. The cause of the issue was found and corrected.
- **GDMS-10153** A change was made to the formula calculations to ensure that one formula's result can be used in a subsequent formula calculation (referencing calculated fields within other calculated fields).
- **GDMS-10136** A modification was made to prevent calculations from firing during the retrieval of rows for Standalone “child” tables.
- **GDMS-10121** Resolved issue with calculation formulas when character data was inadvertently changed to UPPER case, which impacts the possible output of static text within the formula field.
- **GDMS-10089** Resolved general QuickLogger Transfer In issues related to the API.
- **GDMS-10061** A modification was made to the formula calculations in DHLogger when a drill hole is saved to ensure that the min/max validations perform correctly.
- **GDMS-10054** Updates made to the DataSync component to better handle the synchronization of SQL commands (set status to COMPLETE in the case of a column “drop” which doesn’t exist).
- **GDMS-10043** A modification was made to prevent an error from occurring when drawing the window for a data table in DHLogger when a column's title contains a colon (:) character.
- **GDMS-10025** The project picklist is now filtered by business unit in the Drill Hole Maintenance window that is opened from the Projects window, either when double-clicking or clicking 'Add Drillhole'.
- **GDMS-10020** A sorting issue related to reference codes has been resolved in the “Reference Codes to Business Units” window in Fusion Administrator.
- **GDMS-10009** An issue was identified where database roles were not revoked from SQL login after exiting Report Manager. The cause of the issue has been identified and the issue has been corrected.
- **GDMS-10008** A modification was made in Sample Station to stop displaying a false error when you turn off the “Continuous Add” checkbox before hitting OK when creating a new sample.

- **GDMS-10007** A modification was made to the Collar tab in DHLogger to correct an issue with an invalid update statement.
- **GDMS-10006** Resolved issue with HTTPS protocol support for the Fusion web service (URI scheme error).
- **GDMS-9999** An issue was identified with column and table “ID” assignments when generating a blank FusionX Local database from the Central database. The cause of the problem was found and corrected.
- **GDMS-9998** An intermittent synchronization issue was found after creating new users in Fusion. A change has been made to the DataSync component to solve the issue.
- **GDMS-9997** The “Reference Codes to Business Units” window has been enhanced to add collapse/expand functionality, along with a count of the codes assigned to each business unit.
- **GDMS-9963** Resolved issue identified with QAQC charts in Report Manager. It was noticed that certain marker styles such as the “diamond” style were not plotting correctly.
- **GDMS-9901** An issue was found and corrected related to the “External Transfer Out” module when used with the QuickLogger API.
- **GDMS-9898** Added enhanced messaging when there is an issue found with a defined “system admin user” in Fusion Administrator.
- **GDMS-9743** A notification message will be presented to users when a drillhole has data differences between the source and dependant tables (when Table Linking is enabled).
- **GDMS-9530** Implemented a warning message if any coordinate types have a “null” or undefined ranking (in the Business Unit Coordinate Ranking and Coordinate Types table).
- **GDMS-9411** Resolved issue with missing column references when running the “Difference vs. Sample Pair Average” chart in Report Manager.
- **GDMS-9410** Resolved filtering issue with “Original vs. Duplicate” QAQC chart in Report Manager (Results grid).
- **GDMS-9369** An issue was identified with the QuickLogger Transfer Out functionality if no rock codes are assigned to the business unit selected by the user. This has been corrected by exporting a default “Rock Type” code.
- **GDMS-8934** The “Manual Refresh Lists” module will no longer attempt to connect to the Central database when performing a sync between the Fusion Remote and Local databases (DHLogger & Sample Station).
- **GDMS-8697** The Process Flow Authorization menu is now hidden when logged in against the Fusion Remote database - as it is intended to only be available against a Central database.

FusionX Service Pack 4.0.1 (May 2023)

Enhancement

- **GDMS-10006** SSL encryption and the https protocol are now supported with the Fusion Web Service.

FusionX Service Pack 4.0 (April 2023)

Enhancements

- **GDMS-9776** Introduced the ability to log drill hole data using DHLogger while connected directly to the Central and Fusion Remote databases.
- **GDMS-9775** A new API has been implemented to simplify the transfer of data between DHLogger and the QuickLogger app. This is a file-less solution that no longer requires the manual transfer of JSON files to/from the device.
- **QuickLogger** A new secure login module has been implemented. To use QuickLogger, users will be required to enter their Fusion UserID and password along with a mandatory PIN code. If a user forgets their assigned PIN code, there is a link on the log in page which can be used to reset the code.
- **QuickLogger** A new connection manager has been implemented allowing users to automate the data transfer process with the use of a newly implemented API. The user can enter the API host details manually or scan a QR code. This new feature eliminates the need to manually transfer and manage physical .JSON files.
- **QuickLogger** For added security, an expiration check has been added to the QuickLogger app which will require the user to re-authenticate themselves after a period of time. The user will simply be presented with a pop-up window allowing them to re-enter their credentials.
- **QuickLogger** A “New From” option has been added to QuickLogger which will allow users to create a duplicate or copy of an existing record. A new window will load with the pre-filled data and the user can then make the necessary edits.
- **QuickLogger** A new scheduled sync option has added to QuickLogger. Users will now have the option to schedule an auto “Copy in” of their data for backup purposes. With this feature, users can specify the interval at which the sync of data will take place.
- **QuickLogger** Similar to the DHLogger app, the “Copyin” and “Checkin” options have been added to individual parent records in QuickLogger. Note that when a “Checkin” is performed, a copy/backup of the record will remain on the device. Additionally, a “Transfer In” feature has been added to the Options menu at the top which will perform a full checkin of all objects:

- **QuickLogger** The QuickLogger app now supports the Date, DateTme, and Time data types.

  > **Note:** Use of the newly developed API is required for this release. This is the case even if you intend to use the manual .JSON file transfer method.

- **GDMS-9772** Significant performance improvements have been made to the drill hole import module in DHLogger.
- **GDMS-9787** A user-defined table can be configured to store De-surveyed Information for a depth or mid-point of an interval. System Preferences and Business Unit Preferences have been added to configure calculation settings. The drill hole can be manually triggered to de-survey from the Desurvey Drillhole menu item, or it will be triggered when a configured table is saved.
- **GDMS-9789** Enhanced the existing calculation formula feature so that a combination of numeric and character columns can be referenced in the formulas. Previously, only numeric fields can be referenced in a numeric formula.
- **GDMS-9782** Enhancements made to the drill hole import module in DHLogger allowing clients to import .DM files.
- **GDMS-9778** A "New From" toolbar item has been added to the Standalone Tables module which will copy the parent row and child table data, apart from Samples. The child table data copy is controlled by a property found on the User Preferences window.
- **GDMS-9140** The Sample Dispatch module has been enhanced to allow the selection of the Database to perform the actions against.
- **GDMS-9878** SSL encryption (https) has been implemented for the new ExternalTransfer API.
- **GDMS-9843** Several new function calls / endpoints have been added to the ExternalTransfer API.
- **GDMS-9359** The Lab Import module has been enhanced to issue a warning to the user when an Analysis Date is encountered that is greater than the current date, indicating that it could be due to a mismatch of formatting with the regional settings. A new preference can also be configured that can change the flow of the import by stopping or prompting the user to continue when this scenario occurs.
- **GDMS-7594** The Export Grid picklists in the Export windows have been modified to display only the grids that are assigned to the current user's active business unit.

Defect Fixes

- **GDMS-9962** Resolved issue identified with “New From” functionality when generating standalone tables.
- **GDMS-9956** An issue was identified with Report Manager related to incomplete DSN configurations in the system registry. The app has been updated to only look at the default location to fetch the server and database names.
- **GDMS-9930** The Reference Codes to Business Units window was modified to ensure the assignment of Lab Packages is successful against a Standalone Database.
- **GDMS-9919** Changes made to the 'Add to Dispatch' feature to ensure the correct information is populated when a group of samples and standards are chosen to be added.
- **GDMS-9900** Resolved Transfer In issues in DHLogger related to “Finnish” regional settings (specifically the date / time formatting).
- **GDMS-9897** An issue was found related to sample column visibility for storage columns with names greater than 25 characters. The cause of the issue was identified, and the issue has been resolved.
- **GDMS-9896** Resolved issue with app crash when using the “Calculate common coordinates” module against large client databases (thousands of drill holes).
- **GDMS-9890** Resolved issue related to default hole type code associated to blast holes when using the External Transfer Out module in DHLogger.
- **GDMS-9867** Corrected an issue with database locking occurring when performing a quick “Transfer Out” immediately after a quick “Transfer In” in DHLogger.
- **GDMS-9866** A modification was made to the Local database migration utility to ensure the datatypes of character columns in the table/column definition tables are set to CHAR (not VARCHAR).
- **GDMS-9846** The “Reference Codes to Business Units” feature was modified to handle Lab Import Template and Custom Export Design as special cases, preventing a "Problem was encountered" message from occurring.
- **GDMS-9766** The Drill Hole Import module was modified to ensure that the parent_sample_number for modular samples (Original and QC) is properly validate and imported.
- **GDMS-9633** Resolved issue with ExternalTransfer API connection endpoint.

- **GDMS-9609** An issue could occur where the primary key for the dhl_sample_column_details table was not being generated correctly when the statement timed out. The database upgrade has been enhanced to correctly generate the primary key and messaging has been added to the transfer windows to validate the database structure.
- **GDMS-9927** Resolved issue identified with the “SendSampleDispatch” functionality. The XML content is now correctly generated.

FusionX Service Pack 3.3 (May 2023)

Enhancement

- **GDMS-9976** The “Reference Codes to Business Units” window in Fusion Administrator has been enhanced to add collapse/expand arrows, along with a count of the codes assigned to each business unit.

Defect Fixes

- **GDMS-9996** An issue reported where the "New" button was enabled for a QC sample type in the Modular Samples table has been resolved.
- **GDMS-9995** Fusion Administrator was modified to ensure system columns are added to Standalone Tables when created with the “New From” button.
- **GDMS-9993** The “External Transfer In” module has been modified to resolve an issue whereby only the first Standalone object in the file is imported (ignoring objects in subsequent Standalone groups).
- **GDMS-9992** Changes made to the “Add to Dispatch” shortcut feature to ensure the correct information is populated when a group of samples and standards are chosen to be added.
- **GDMS-9991** A locking issue has been resolved which was occurring when performing a Quick Check Out immediately after a Quick Check In in DHLogger.
- **GDMS-9990** The “Reference Codes to Business Units” administrative module was modified to handle Lab Import Template and Custom Export Design code assignments. Thus preventing a "Problem was encountered" message from occurring.
- **GDMS--9956** Resolved login issue in Report Manager when a user’s system contains both System and User DSN entries (ODBC). The issue was specific to the Central and Fusion Remote database connections only.
- **GDMS-9900** A drill hole Transfer In issue was identified when using a Date format specific to the Finland/Finnish regional settings. The date format is now supported, and the issue has been corrected.
- **GDMS-9801** An issue was identified with the “Data Points – ALL” marker in the legend for Standard Control Charts in Report Manager. This marker was

causing an issue with customizations made to the data points for the standard control chart. The marker has been removed and the issue has been resolved.

FusionX Service Pack 3.1 (December 2022)

Enhancements

- **GDMS-9798** The ExternalTransfer API has been enhanced and includes additional optional parameters.
- **GDMS-9373** Sorting has been disabled in the Preparation Package Details and Density Package Details configuration windows when packages are created.
- **GDMS-9406** Modifications were made to the Reference Codes to Business Units window in Fusion Administrator to improve the general performance of the module.
- **GDMS-9581** The Lab Import module has been enhanced to include static text that displays the progress of the actions of the import, including the progress/count of the imported samples.
- **GDMS-9140** The Sample Dispatch module has been enhanced to allow the selection of the Database to perform the actions against (Local, Remote, Central).
- **GDMS-9553** Added the ability to exclude Drill Hole or Sample Station entities from the “External Transfer Out” module with the addition of an "Exclude" entry in the logging style picklists.
- **GDMS-9739** The bay capacity has been extended from 100 to 500 in Coreshed.
- **GDMS-9752** A new profile (EXTERNAL LOGGER) has been added to identify that a user performs logging on an external application. The profile will prevent that user from logging into DHLogger, Sample Station, and Fusion Administrator.
- **GDMS-9791** The Modular Sample Tags window has been enhanced to ensure the picklist of modules displays only those assigned to the active logging style of the user.
- **GDMS-9753** Implemented validation check to prevent users with the “EXTERNAL LOGGER” profile from logging into Coreshed.

Defect Fixes

- **GDMS-9609** An issue could occur where the primary key for the dhl_sample_column_details table was not being generated correctly when the statement timed out. The database upgrade has been fixed to correctly generate the primary key and messaging has been added to the transfer windows to validate the database structure.
- **GDMS-8801** Resolved Coreshed limitation where custom columns were not available in the storage and import modules.
- **GDMS-9597** Resolved import issue in Coreshed related to the column mappings.
- **GDMS-9603** An issue was identified and fixed with the QuickLogger import module where data for custom “interval related” tables could not be imported.
- **GDMS-9732** Resolved issue importing data into QuickLogger app when the primary key of a standalone group is a DATE column.
- **GDMS-9741** An issue was identified and corrected whereby the “password_set_date” field was not updated correctly when a user updates his/her password using the Fusion Portal.
- **GDMS-9744** Validation has been added to ensure that all primary key fields have a “display_column” value of “Y” when working with QuickLogger.
- **GDMS-9749, GDMS-9790** Resolved general issues identified when attempting to import a .JSON file into the QuickLogger app.
- **GDMS-9804** An issue was identified with the sample dispatch module where the error “Syntax Length = 0” was returned when clicking on the Group Samples option. The cause of the issue was found, and it has been fixed.
- **GDMS-8973** Resolved issue with the filter bar in the process authorization window when the filter bar was set to 'Retrieve filtered on open'
- **GDMS-9570** An issue has been corrected with the validation rule verification in the DHLogger logging interface.
- **GDMS-9574** Resolved issue with repeating validation error when import data using the Drill Hole Import tool.
- **GDMS-9586** The Options menu in the Drill Hole folder has been modified to include a vertical scrollbar if the size of the window is too small for the entire drop-down menu. As well, its opening position was modified to ensure that it is visible when clicked.
- **GDMS-9688** Resolved limitation with “View Logs” window when using the silent import tool.

- **GDMS-9745** A change was made to the Drill Hole Import to ensure that the module will open when a user's active logging style contains only UDEF or Standalone tables.
- **GDMS-9758** A modification was made to the Scheduled Sample Check In window to resolve a display issue with the list of available samples.
- **GDMS-9766** The Drill Hole Import module was modified to ensure that the “parent_sample_number” for modular samples (Original and QC) is properly validate and imported.
- **GDMS-9769, GDMS-9770** Resolved issue with Geology Log component in DHLogger. When a hole reached 1000 meters, the major/minor geology log was not displayed correctly. The issue was due to regional settings.
- **GDMS-9815** A modification was made to the Modular Samples - Print Tags to ensure that the use of filters does not produce a database error.
- **GDMS-9816** Modular Samples - Print Tags window was modified to ensure the correct drawing of the window when the Selection Criteria is collapsed and expanded.
- **GDMS-9821** Logs were not being saved correctly for External Check In when the file only contained standalone data and the standalone tables had many keys specified. The cause of the issue was found and corrected.
- **GDMS-8941** The “current_owner” column has been added to the Projects window as well as the Transfer windows.
- **GDMS-9697** Resolved issue when attempting to generated planned drill holes that contained data with single quotes.
- **GDMS-9731** The External Transfer Out was modified to ensure that the codes visible in QuickLogger picklists are limited by business unit in the same way they are limited in DHLogger.
- **GDMS-9740** The wording for the password expiry message has changed to be clearer when the password will expire.
- **GDMS-9822** An issue was found where an invalid message about revoking permissions would be displayed when switching to another window after previously opening the External Transfer Out window and selecting an invalid database. Permissions are now correctly handled, and no message is displayed.

FusionX Service Pack 3.0 (November 2022)

Enhancements

- **GDMS-8464, GDMS-9589, GDMS-9590, GDMS-9591** The dependency on the SQL Server user “admin” has been removed. Clients can now configure their own SQL administrator “super user” account and flag that user as the administrator of the database. That account is then used to programmatically grant and revoke roles to users as they login and exit the Fusion applications.
- **GDMS-9344** Enhancements made to the Fusion oriented core module. Lineation calculations are now performed using Alpha, Beta, and Gamma angle inputs provided by the user.
- **GDMS-9419, GDMS-9584** A new web service has been developed to seamlessly transfer data between the Fusion desktop applications and the QuickLogger app (iOS, Android, Web).
- **GDMS-9454. GDMS-9605** The Fusion Scheduler service has been enhanced to handle the transfer of “standalone” table objects.
- **GDMS-9537. GDMS-9661** Enhancements made to the QuickLogger application to support multi-key standalone table objects. Previously, the app only supported objects with a single primary key.
- **GDMS-9550** Introduced JSON Web Tokens to the QuickLogger app to handle licensing and user security.
- **GDMS-6361** Added multi-select capabilities to the various administration modules in Fusion Administrator (business unit, logging style assignments).
- **GDMS-6653** The XYZ Calculator has been updated to use the top-ranked coordinate type thus resulting the limitation to using only the P or E coordinate types.
- **GDMS-6981** A new feature has been added to DHLogger allowing users to set their own custom table ordering in the “Details” logging interface.
- **GDMS-9387** Significant performance improvements have been made to the various transfer windows (Transfer In / Transfer Out).
- **GDMS-9351** The Lab Import module has been enhanced to support the import of text result columns for modular samples and drill hole samples.
- **GDMS-9352** General performance improvements have been made to the drill hole sampling logging interface as well as the modular sampling interface.

- **GDMS-9517** Updated user encryption model in Fusion Connex so that the app is now supported with FusionX SP1 or greater. These updates will also be implemented in Discover.
- **GDMS-9524** Support has been added for very long CSV lab file names. Previously, a file with a very long name would result in an error during the lab import process and users were required to edit the file name.
- **GDMS-9527, GDMS-9642** QuickLogger device registration has been implemented. Device ID's will be tracked for licensing purposes.
- **GDMS-9578** The QuickLogger Import module has been updated to support importing from a file or from the database.
- **GDMS-9583** Silent and semi-automatic support has been added for External Check In. Users can initiate the silent external check in by opening DHLogger with command line parameters, or users can initiate a semi-automatic transfer of pending external transfers from the new Pending Transfers window that will be displayed on open of DHLogger when transfers are pending. Pending transfers will occur in the background and users will be notified with a toast notification once the transfers are complete.
- **GDMS-9635** A "Password Warning Length" field has been added to the User Maintenance window allowing the client to control when the warning message to change a user's password is displayed. Default = 7 days.
- **GDMS-9363** Validation rules were previously allowing the user to exit the data entry screen with data outside the rules. Updated Drill Hole, Blast Hole and Surface Sample data entry windows to prevent users from exiting / saving without first resolving the issues.
- **GDMS-9388** Special symbol support has been expanded for hole_numbers, samples, composite samples, standards, surface samples, sample naming templates, planned hole naming templates, qc packages and analytical flows. These include the use of: dash, period, left/right parenthesis, and colon.

  > **Note:** The following characters are NOT supported: single quote ('), double quote ("), comma (,), semicolon (;), tilde (~), at (@), and pound (#).

- **GDMS-9536** A new menu item has been added to Fusion Administrator to allow admins to review and maintain registered QuickLogger devices. The information is stored in the "FUSION_DEVICE_REGISTRY" table.
- **GDMS-9651** Users can now restrict the usage of an exported QuickLogger (JSON) file to devices that have been registered in Fusion Administrator.
- **GDMS-9281** QuickLogger Transfer In has been enhanced to support Planned Drillhole objects.

- **QuickLogger V1.1.0** Implemented archived Workfile view in QuickLogger. Users can view the active Workfile as well as “archived” files that have since been exported.
- **QuickLogger V1.1.0** Enhanced the QuickLogger app to support the use of standalone tables including “parent” and “child” relationships.
- **QuickLogger V1.1.1** Introduced ability to import multiple Workfiles into QuickLogger. Previously, only a single Workfile could be imported.
- **QuickLogger V1.2.0** Added ability to delete a parent record in QuickLogger that also contains child records. A warning prompt will be returned to the user to ensure that they want to delete the associated records.
- **QuickLogger V1.2.0** New feature added allowing users to generate QC samples and standards for standalone tables (modular samples).
- **QuickLogger V1.3.20** Implemented new feature allowing users to delete “archived” Workfiles from their devices.
- **QuickLogger V1.4.6** A new “About” page has been introduced to the QuickLogger app. Users can additional information regarding the logging tool and can access the support email account.
- **QuickLogger V1.5.0** Fields that have defined formulas are now supported in QuickLogger. Those fields will be locked from editing and the value will be automatically calculated using the formula/logic defined in Fusion.
- **QuickLogger V1.5.0** Device ID registration has been implemented in QuickLogger. The device and userID will be tracked for licensing purposes.
- **QuickLogger V1.5.0** Composite primary keys are now supported in QuickLogger. Previously, only standalone tables with a single primary could be imported/exported.

Defect Fixes

- **GDMS-9423** A modification was made to the Standalone Tables module that allows child records and modular samples from being deleted when the status = "CHECKEDOUT".
- **GDMS-9660** Resolved issue with QuickLogger Transfer Out where the Sample_Status default was null for the SSTN_SURFACE_SAMPLES table when it should be “Logged”.
- **GDMS-9649** Picklists that refer to the Rock_Type table, when the "Specify Lithology Details" business unit preference is enabled, will now have values properly displayed (data column and display column).

- **GDMS-9645** Resolved issue running reports in Report Manager (“An item with the same key has already been added”) when there is a duplicate label used in the summary or results grid for 1 more QAQC charts.
- **GDMS-9631** A performance issue was identified when cycling between tables in DHLogger that contain many columns linked to pick lists. The cause of the issue was identified, and the app performs much quicker.
- **GDMS-9628** An issue was found when attempting to query a “parent” Standalone table using the Query module in Report Manager. The cause of the SQL issue was found, and the issue has been resolved.
- **GDMS-9618** The External Check In was not correctly accounting for data ending in double quotes when parsing the .JSON file. Updated the External Check In to account for double quotes at the end of data.
- **GDMS-9616** Resolved issue with QuickLogger Transfer Out module where the hole type for Blast Holes was not properly set in the resulting JSON object.
- **GDMS-9567** The Drill Hole Import module has been modified to support the calculation of formulas for columns in the Modular Samples table. The system computed column of “Length” has been renamed to avoid confusion with a possible user-created Length column in each of the sample tables: Drill Hole, Composite, Modular.
- **GDMS-9566** An issue was found with the Lab Import Template validation during a Lab Import of “Modular Samples”. Ensuring that the 'Element Identifier' is retrieved for the correct Lab Package.
- **GDMS-9555** An application issue was noticed when attempting to archive holes using the Fusion Archive module. A modification was made to ensure that the correct list window is set when opened (drill holes or surface samples).
- **GDMS-9538** The QuickLogger Transfer Out window has been modified to ensure the filter bar is reset when the Business Unit or Logging Style changes which will prevent an 'ambiguous column' error during the retrieve action.
- **GDMS-9531** Resolved issue with unexpected close of the Fusion Portal app when attempting to upload a local database.
- **GDMS-9528** Resolved issue with QuickLogger Transfer Out of certain Workfiles resulting in an application error.
- **GDMS-8888** The column/cell size limitation of 100 characters in a Lab Import CSV file has been increased to 1000 characters (still a limit of 200 columns).

FusionX Service Pack 2.2.1 (November 2022)

Defect Fixes

- **GDMS-9528** Resolved issue with QuickLogger Transfer Out module when a reference table contains a column ending in “ID” or certain special characters.
- **GDMS-9734** A modification was made to the configuration of Standalone Tables (deletes) to ensure that the delete of the definition is logged to common_sql_statements to cascade to the Remote and Local databases. A repair of existing Remote and Local databases was also implemented in the Database Upgrade code to delete any definitions that remain for tables that do not physically exist.
- **GDMS-9555** An issue was identified when accessing drill holes using the Fusion Archive module. The cause of the issue was identified and corrected.
- **GDMS-9635** A Password Warning Length field has been added to the User Maintenance window allowing clients to control when the warning message to change a password is displayed.
- **GDMS-9649** Picklists that refer to the Rock_Type table, when the "Specify Lithology Details" business unit preference is enabled, will have values properly displayed (data column and display column).
- **GDMS-9538** The QuickLogger Transfer Out window has been modified to ensure the filter bar is reset when the Business Unit or Logging Style changes which will prevent an 'ambiguous column' error during the retrieve action.
- **GDMS-8888** The column size limitation when opening a Lab Import file has been increased to 1000 characters (still a limit of 200 columns).
- **GDMS-9559** Resolved issue where numeric values were not always passed as strings to the JSON file as part of the QuickLogger Transfer Out routine.
- **GDMS-9566** An issue with the Template Details validation in Lab Import was corrected to ensure that the 'Element Identifier' is retrieved for the correct Package.
- **GDMS-9567** The Drill Hole Import has been modified to support the calculation of formulas for columns in the Modular Samples table. The system computed column of “Length” has been renamed to avoid confusion with a possible user-created Length column in each of the sample tables: Drill Hole, Composite, Modular.

- **GDMS-9618** An issue was identified with the QuickLogger Transfer In module when the data set ends with double quotes. Updated the module to account for double quotes at the end of data.

FusionX Service Pack 2.2 (July 2022)

Enhancements

- **GDMS-6916** Implemented support for special characters that can be used in usernames, hole numbers, and sample numbers in Fusion.
- **GDMS-8854** Support for Modular (Standalone) Samples has been added to the Sample Dispatch module.
- **GDMS-9306** The Laboratory Name is now displayed next to the Lab Package reference list in the “Reference Codes to Business Units” window.
- **GDMS-6653** The XYZ Calculator module has been updated to use the top-ranking coordinate type, instead of limiting to “P” or “E” coordinate types.
- **GDMS-6507** Fusion Administrator has been enhanced to include the "New From" capabilities in both the Logging Style and Business Unit modules.
- **GDMS-9387** Significant performance improvements have been made to both the “Transfer In” and “Transfer Out” modules. It now takes less time to load the initial list of objects and to perform a “retrieve” when a filter is applied.
- **GDMS-9394** QuickLogger - A new field has been added to the header section of the JSON file. It will contain the version of the script/dll that was used to produce the file.
- **GDMS-9399** The Standalone Transfer In window was modified to remove the 'editable' feel of the list of objects and ensure the drag-and-drop of records when applicable.
- **GDMS-9450** A modification was made to the QuickLogger Transfer In to prevent the update of key columns in the Validation window (hole_number, sample_number).
- **GDMS-9363** Validation Rules - Enhance “Halt Validation On Failure” feature to prevent user from leaving window without correcting data.
- **GDMS-9469** Introduced support for “modular samples” in the custom sample tag designer module.
- **GDMS-9466** Introduced new feature allowing users to print “modular samples” from the sample tag printing module.

Defect Fixes

- **GDMS-9462** Resolved minor issue with table name reference in the QuickLogger Transfer Out module.
- **GDMS-9459** Resolved issue with minor intervals appearing as major intervals in the JSON file generated using the Transfer Out module in DHLogger.
- **GDMS-9457** The QuickLogger Transfer Out window was modified to resolve an issue with the resize of the filter bar when the database type is changed.
- **GDMS-9456** The QuickLogger Transfer Out window was modified to clear the memory of a selected Standalone Table when the database changes, so that a retrieve is not automatically performed (in case a synchronization is required, or table differences exist).
- **GDMS-9493** Resolved minor display issue with “table_name” listed in QuickLogger Transfer-In and Out modules.
- **GDMS-9445** An issue was identified with false “sample number” validation messaging in the Projects window in DHLogger. The cause of the issue was identified, and the issue is resolved.
- **GDMS-9422** Resolved issue identified when performing a QuickLogger Transfer Out as a user other than “admin”.
- **GDMS-9421** Resolved issue with QuickLogger Transfer Out module when attempting to export data for standalone tables.
- **GDMS-9420** An issue was identified with the export of the “Table_Data” section of the JSON file when performing a “Transfer Out” using DHLogger.
- **GDMS-9397** Resolved issue whereby the validation rules were not being triggered in the case of blast holes and surface sample object types.
- **GDMS-9385** The Drill Hole Import module (Standalone Tables) was modified to ensure that rows for a child record are not updated to a different parent if the same unique index column data is used . An insert should be used, as the data is to be unique for each parent, not per table.
- **GDMS-9350** A modification was made to the Collar window in the Drill Hole folder and the QuickLogger Transfer In validation window to ensure that the 'Maximum Depth' column is visible when it has been set to required or validation is enabled.
- **GDMS-9349** The QuickLogger Transfer In has been modified to ensure that if "maximum_depth" value is entered during validation, due to missing information in JSON file, the value will be imported correctly to the drill_hole table.

- **GDMS-9347** A display change was made to the Standalone Tables module to ensure that the format of a numeric column in a child table shows the correct customized decimal places.
- **GDMS-9336** The “Latest News” window no longer displays surface samples and drill holes outside of the active user’s business unit.
- **GDMS-9316** The sample number wasn't being incremented correctly when adding modular samples with depths ahead of existing samples. The cause of the issue was identified and corrected.
- **GDMS-9310** Resolved issue with QuickLogger Transfer In module when Windows Authentication is used. An error was occurring during an import into both the Central and Fusion Remote database types.
- **GDMS-9276** The QuickLogger Transfer In has been modified to ensure that the maximum depth field is correctly checked - requiring a value if "maximum_depth validation" is enabled.
- **GDMS-9256** Resolved issue with link to “HowTo” manual in Report Manager.
- **GDMS-9242** An issue was identified when trying to export to .TXT format in Report Manager. The cause of the issue was identified, and the issue has been corrected.
- **GDMS-8999** Resolved minor display issue with vertical scroll bar in validation rule data window.
- **GDMS-9460** The “Manage Sample Station Standards” window was modified to prevent an intermittent error while deleting standards.
- **GDMS-9433** An issue was identified in Report Manager when attempting to query Sample Station tables. The issue was due to an attempt to link the parent table to a hole number. The issue has been resolved.
- **GDMS-9404** A minor issue was resolved with the drill hole import module when importing contractor data.
- **GDMS-9392** QuickLogger Transfer In has been modified to present a user-friendly message when a file cannot be parsed properly, resulting in a mismatch of columns vs data values.
- **GDMS-9365** The Graphic Log was modified to ensure columns in an interval-related custom table are properly drawn.
- **GDMS-9343** Resolved issue with Original vs. Duplicate chart in Report Manager. A syntax error was being returned when a filter is set on a Sample Station column.
- **GDMS-9143** The Drill Hole Import has been modified to perform an update of the “Start_Depth” and “Final_Depth” fields in the drill hole table when Major interval and/or Sample data is imported and the destination is the Fusion Remote or Central database.

FusionX Service Pack 2.1 (May 2022)

Enhancements

- **GDMS-9340** QuickLogger transfer out has been updated to prevent the transfer out of mixed holes. Complete holes are required for a transfer.
- **GDMS-8933** An enhancement has been introduced to the Transfer In/Out windows to use the 'Default Data source' as specified in the Synchronization Settings for the default value in the Source/Destination Database picklists.
- **GDMS-4592** The Batch Authorization filtering logic has been enhanced to restrict access to batches for projects outside of the QP's active business unit.
- **GDMS-8932** The Synchronization Settings window has been enhanced to support multiple Fusion Remote databases
- **GDMS-9327** Added object sorting capabilities to QuickLogger Transfer modules.
- **GDMS-9324** A change has been made to the Validation window in the QuickLogger Transfer In window to ensure that only the validations for the current transfer are being displayed (text/label cleanup).
- **GDMS-9291** A new Reports menu item has been added under "Other Options" in DHLogger. Users can now batch print or batch save reports against any database type.
- **GDMS-9334** The Drill Hole Import module has been modified to update the "current_owner" field with the current user id in the temporary transfer/audit table.

Defect Fixes

- **GDMS-9331** A minor display issue in the "Custom Column" configuration module has been corrected so the Lookup Style and Decimals To Show labels do not overlap each other.
- **GDMS-9330** The Drill Hole Collar window was modified to ensure a row has been retrieved before checking for null data, resolving an issue with context-sensitive columns (specific to contractor_id field).

- **GDMS-9302** Sample Dispatch was modified to ensure that the “elements_ sample_for” field is correctly populated when the Lab Package changes.
- **GDMS-9301** The sample number was not always being incremented after adding a new sample and adjusting the depths to occur ahead of all other samples. The next sample number for the hole is now correctly incremented regardless of the insertion order.
- **GDMS-9295, GDMS-9296, GDMS-9297, GDMS-9298** Some general display/transfer issues were identified with the QuickLogger Transfer In module. The cause of the issues was identified, and the issues are resolved.
- **GDMS-9287** In some cases, an application error was occurring in DHLogger when attempting to load an image from a blob field or attach a new image. The cause of the issue was identified and corrected.
- **GDMS-9282** The Planned Drillholes module has been modified to prevent a user from changing the status of a DRILLED hole.
- **GDMS-9258** Modifications were made to the Samples windows in both DHLogger and Sample Station to ensure that the display of numeric data is correctly using the value set in the "Decimal Places to Show" in the column configuration.
- **GDMS-9218** A modification was made to the Administrator Access window in DHLogger to prevent an error on Save when a DSN for a DB other than the logged in DB is chosen.
- **GDMS-9189** A fix was made to the Sample Dispatch module to ensure that a custom column that has a checkbox style is displayed correctly.
- **GDMS-9162** An issue was found with Table Linking where regions using a comma for a decimal separator were unable to generate records automatically or manually in linked tables. Table linking has been updated to correctly handle different regional settings for the decimal symbol.
- **GDMS-8954** An issue has been resolved related to a limitation of the geology log control where users were not able to open the Details and Samples screens when a drill hole has over 1000 interval records.
- **GDMS-8907** Resolved issue importing data for custom “DateTime” columns in the drill hole samples table.
- **GDMS-8868** An issue has been identified and fixed with the Queries module in Report Manager where a SQL error was returned when a query includes an alias for the drill hole table and "Projects Access Limited by Business Unit" preference is enabled.
- **GDMS-8817** An issue was reported where the “common coordinates” were not being re-calculated after a drill hole import of coordinate data. This issue has been resolved.

- **GDMS-8902** An issue was identified when running large custom exports using Report Manager and DHLogger. In some cases, the CSV files were not generated or incomplete because of the large data set. The cause of the issue was identified and resolved.

FusionX Service Pack 2.0 (March 2022)

QuickLogger

GDMS-8698 A mobile logging solution has been added to the Fusion suite of applications. “QuickLogger” is now available for iOS and Android devices. A web-based version is also available. This is the perfect data capture tool to compliment our existing Windows-based DHLogger and Sample Station logging applications.

Enhancements

- **GDMS-8576** The Standalone table module has been enhanced to support sampling and QAQC analysis. A standalone child sample table can now be linked to a grouping and QC sample types as well as standards are fully supported (lab import / assay monitoring).
- **GDMS-7913** The existing “CENTURY” grid conversion method has been enhanced allowing clients to define custom formula transformations between grid types. Complex formulas can be defined using a large set of trigonometric functions and static variables.
- **GDMS-7524** Fusion’s audit module has been enhanced to track a full history of all administrative changes to the database. The username, timestamp, and description of the changes will all be logged in the “DHL_AUDIT_LOGGING” table.
- **GDMS-7225** A new preference has been introduced to Fusion to update sample and standard references in the Sample Dispatch module when changes or corrections are made in DHLogger / Sample Station (sampling error or standard mix ups).
- **GDMS-6853** To complement the enhancement where administrators can now edit standard limits in Fusion Administrator, an option has been introduced which will allow the admin to Re-assess data associated to pre-existing batches based on the newly defined limits.
- **GDMS-4615** The drill hole and surface sample import modules have been enhanced to support both the “insert” of new records and “update” of existing records. Previously, it was only possible to insert new records in most data tables.

- **GDMS-2014** It is now possible to edit the limits associated to existing standards in Fusion Administrator. An admin will be warned of the impact of this change and the audit table will be updated accordingly. Previously a SQL script was needed to perform this change.

Defect Fixes

- **GDMS-9080** Resolved minor display issue where “Blast Hole” module option was not listed under a newly created Logging Style in Fusion Administrator.
- **GDMS-9071** We’ve solved a minor display issue in DHLogger when a user enters a leading space in the hole number field by mistake. In some cases, the collar screen goes blank and is not editable. The leading spaces are now trimmed prior to the insert into the database.
- **GDMS-8947** Resolved issue when attempting to save a .LAS file using the LAS module in DHLogger.
- **GDMS-8939** Resolved issue with Export module in Report Manager where changes made to existing export were not actually being saved.
- **GDMS-8899** An issue was identified when running very large exports in DHLogger. The cause of the issue, related to memory / system resources, was identified and a solution was implemented to handle these cases.
- **GDMS-8882** Resolved issue where a non “admin” user was unable to login to DHLogger (Local environment) immediately after a Fusion upgrade.
- **GDMS-8843** An issue was identified with the context sensitive feature when linked to the rock type table. A change was made to the Rock Code tree popup that will ensure that context sensitive fields are properly populated with their default, and the lists are correctly filtered.
- **GDMS-8835** User passwords that are stored in the table mapping table in the Fusion database are now encrypted.
- **GDMS-8828** Resolved intermittent lag / locking issues in DHLogger and Sample Station that were caused by users opening certain modules while logged in against the Central environment.
- **GDMS-8827** Correction made to message returned to users when accessing the Transfer In/Out modules and there was no valid destination database available. The correction was made to both DHLogger and Sample Station.
- **GDMS-8513** The Add/Delete buttons have been repositioned to ensure that intervals can be added to Contract Details in the Drill Hole Costing module.

- **GDMS-9072** An issue was reported when attempting to change the “admin” user’s password using the Fusion Portal. The cause of the issue was identified and corrected.
- **GDMS-9008** Resolved issue with timeout error being returned when a backup of a very large local database was being performed using the Fusion Portal utility.
- **GDMS-8899** Resolved general performance issues identified with the Sample Dispatch module when connected to a Fusion Remote or Central database and working over a high latency connection.
- **GDMS-8734** An issue was identified with the synchronization of LAS configuration changes. The cause of the issue was identified and resolved.

FusionX Service Pack 1.2 (November 2021)

Defect Fixes

- **GDMS-8887** Resolved issue where the analytical flow and screen size names were not recorded for size fractions associated to QC samples.
- **GDMS-8824** An issue was raised with the Export module in Report Manager. Windows Authenticated users could not run custom exports. The cause of the issue was identified, and the issue has been resolved.
- **GDMS-8869** Resolved issue during the data transfer (copyin/checkin/copyout/checkout) of standalone table records when the web service is enabled.
- **GDMS-8897** Resolved issue when attempting to generate "Global plus density fractions" and "Global plus all first-level fractions" associated to composite samples in DHLogger.

FusionX Service Pack 1.1 (August 2021)

Defect Fixes

- **GDMS-8814** An issue was identified where the planned hole module became unresponsive after selecting the “Central” database option. The cause of the issue was identified and has been resolved.
- **GDMS-8812** Resolved issue when attempting to access the “Transfer Out” module in DHLogger when the “selective checkout” preference is enabled.
- **GDMS-8810** Resolved list synchronization issue when the web service is enabled. In some cases, changes to certain references tables did not synchronize from the Central to the Local database.
- **GDMS-8807** Resolved issue where formulas were being reset for labs in the “Analytical Flow” configuration window after adding or revoking an unrelated lab.
- **GDMS-8806** A horizontal scroll bar has been added to the formula fields for Analytical Flows to solve a character restriction issue.
- **GDMS-8805** Resolved issue where new records added to custom interval-related tables did not span the width of a selected major or minor interval.
- **GDMS-8735** An update has been made to the validation message returned to the user when there is an issue with a mapping to a LAS file (specifically the mapping for the “Depth” field).
- **GDMS-8043** An issue was raised where assays are not imported using the lab import module when a hole is partially authorized (using process flows). This issue has been resolved and users will now be able to import assays if the sample table is not authorized.
- **GDMS-8790** Resolved application error that was occurring when attempting to assign 1 or more standards to a dispatch and the preference to limit the samples for a dispatch is enabled.
- **GDMS-8789** An issue was noticed when clicking on the “Central” database option in the planned hole module in cases where there are columns or labels with different cases in the local & central databases. This issue was intermittent depending on the configuration of the table and has been resolved.

FusionX Service Pack 1.0 (August 2021)

Enhancements

- **GDMS-7989** A new module for "Standalone Tables" has been developed with the option to have parent/child relationships with primary and foreign keys. In addition, standalone tables and groupings can be transferred between databases using the standard checkin/checkout functionality.
- **GDMS-6666** User passwords now support letters, numbers and symbols. Only the following symbols are not available for use in the password: { } [ ] ( ) ' " ~ ;
- **GDMS-6666** An option to enforce a password policy has been added for each user as well as an option to specify when the password expires.
- **GDMS-6350** Users can now use the UP/DOWN arrows next to each chart input to re-order the series options for the Z-Score chart in Report Manager.

Defect Fixes

- **GDMS-8777** Resolved issue with validation rules when multiple tables are referenced in the rule syntax and at least 1 of those tables is a custom “UDEF” table.
- **GDMS-8725** A fix was made to table-level validation so that duplicate validation can be performed correctly when overlaps are not allowed.
- **GDMS-8708** Resolved issue with validation rule being triggered when the rule table is not active.
- **GDMS-8684** Solved minor application error that was returned when performing a “save” operation in the Samples windows in DHLogger when no samples exist.
- **GDMS-8683** Re-introduced menu item to access the “Manage Sample Station Standards” window.
- **GDMS-8682** Resolved DHLogger login issue that was occurring immediately after an upgrade when the “admin” user password is not the default password supplied with the initial database set.

- **GDMS-8670** An issue was identified when a user other than the creator of a custom export (Report Manager) attempts to run the export. This issue has been resolved.
- **GDMS-8637** Resolved issue with “unknown error” that was occurring when running a custom export against the DHLogger local database.
- **GDMS-8574** Datasync has been updated to prevent synchronization issues when transferring data with upper/lower case differences.
- **GDMS-8569** A modification was made to ensure that the picklist used to display Reference Holes in the Depth Adjustment module is not always empty.
- **GDMS-8566** Resolved issue with incorrect validation error being returned for “required” columns when those columns are not assigned to the user’s active logging style (hidden from view).
- **GDMS-8558** An issue has been resolved in Report Manager where an “unknown error” was returned after clicking on the Enhanced mode with the database logging preference enabled.
- **GDMS-8550** Resolved synchronization issue that was occurring when a custom surface sample column deleted (related to business unit preferences).
- **GDMS-8545** Resolved import issue where users were able to import codes into custom pick lists in the “hole_interval” table that are not configured in the database.
- **GDMS-8544** An issue was identified where calculated fields were not correctly updated in some cases when running a drill hole import. The cause of the issue was identified and fixed.
- **GDMS-8514** Resolved synchronization issue in Report Manager that was occurring if a global report is created and it contains at least 1 global widget.
- **GDMS-8493** Significant performance improvements have been introduced to the Sample logging interface in DHLogger.
- **GDMS-8476** Resolved copyout/checkout issue if a configuration change has been made just prior to the transfer. User will now be prompted to perform a refresh lists.
- **GDMS-8467** The prompt to delete the copy of a drill hole after a “quick” checkin has been added (if the preference is enabled).
- **GDMS-8083** Resolved issue where windows authenticated logins were not removed in SQL Server when a user is deleted in Fusion Administrator.
- **GDMS-7872** The drill hole import has been updated to correctly validate and accept contractor name data for columns that reference the contractor table.
- **GDMS-5529** An issue was reported with Fusion Administrator when logged in as a Windows-Authenticated administrator (one who has been granted the server role 'securityadmin' in SQL Server), whereby they would be prompted

to enter another user's credentials when trying to create or edit a user in the User Administration module. The cause of the issue was identified and corrected.

FusionX Service Pack 0.3.4 (November 2021)

Defect Fixes

- **GDMS-8887** Resolved issue where the analytical flow and screen size names were not recorded for size fractions associated to QC samples.
- **GDMS-8897** An issue was identified and fixed with the creation of size fractions associated to composite samples.
- **GDMS-8898** Resolved issue with “Photo Download” module where drill holes were listed in the transfer window instead of core photos.

FusionX Service Pack 0.3.2 (August 2021)

Defect Fixes

- **GDMS-8814** An issue was identified where the planned hole module became unresponsive after selecting the “Central” database option. The cause of the issue was identified and has been resolved.
- **GDMS-8810** Resolved list synchronization issue when the web service is enabled. In some cases, changes to certain references tables did not synchronize from the Central to the Local database.
- **GDMS-8807** Resolved issue where formulas were being reset for labs in the “Analytical Flow” configuration window after adding or revoking an unrelated lab.
- **GDMS-8806** A horizontal scroll bar has been added to the formula fields for Analytical Flows to solve a character restriction issue.
- **GDMS-8805** Resolved issue where new records added to custom interval-related tables did not span the width of a selected major or minor interval.
- **GDMS-8798** An issue was identified with the drill hole import module where the parent sample number for imported QC samples was not always populated. The cause of the issue was identified and resolved.
- **GDMS-8043** An issue was raised where assays are not imported using the lab import module when a hole is partially authorized (using process flows). This issue has been resolved and users will now be able to import assays if the sample table is not authorized.
- **GDMS-8790** Resolved application error that was occurring when attempting to assign 1 or more standards to a dispatch and the preference to limit the samples for a dispatch is enabled.
- **GDMS-8789** An issue was noticed when clicking on the “Central” database option in the planned hole module in cases where there are columns or labels with different cases in the local & central databases. This issue was intermittent depending on the configuration of the table and has been resolved.

FusionX Service Pack 0.3 (June 2021)

Enhancements

- **GDMS-8447** Implemented new feature in the Fusion Portal which allows a user to update his or her password.
- **GDMS-8572** Added menu item to Sample Station to allow users to manage standards in the Central database.

Defect Fixes

- **GDMS-8538** Resolved initial login issue after upgrading to FusionX and a custom password is set for the “admin” account.
- **GDMS-8570** Resolved issue with drill hole import module while attempting to import data when the “selective checkout” preference is enabled.
- **GDMS-8573** Resolved issue where an application error was occurring when attempting to trigger a save for a QC sample type when the hole contained no QC samples (in the drill holes samples window).

FusionX Service Pack 0.2 (April 2021)

Enhancement

- **GDMS-8530** Introduced significant performance enhancements to the main “Details” window in DHLogger. Loading and selecting tables from the “Active Table” pick list is now much quicker.

Defect Fixes

- **GDMS-8449** Resolved general performance issues with the standard Interval table when custom columns have been added (specifically pick lists). At times it could take up to 3 seconds to load the pick list items. The cause of the issue has been identified and the problem has been resolved.
- **GDMS-8493** Resolved performance issues in the Sample screen in DHLogger. A significant decline in performance was noticed as many samples were being logged using the “New” button, ENTER key, and/or CTRL+N shortcuts. Also resolved performance issue with vertical & horizontal scrolling in the sample screen.

FusionX Service Pack 0.1 (March 2021)

Enhancements

- **GDMS-8457** A new picklist for selecting the database has been added to the Projects window that allows all users to view the “status” / “checkedout computer” assigned to Drill Holes and Surface Samples.
- **GDMS-8455** Introduced new “Loading...” message/thread to DHLogger to better inform the user that the collar window is loading, and that the app is responsive.
- **GDMS-8453** The ability to rename drill holes and surface samples has been migrated to the “Projects” window. The behaviour is very similar as the option which was previously available from the “Drill Hole Maintenance” window in Fusion Client.
- **GDMS-8452** A new option has been added to the “Synchronization Settings” module so that objects such as planned holes, audit records, and dispatches move up to the Central or Fusion Remote (depending on the default data source setting) during a Copyin or Checkin of a drill hole or surface sample. Previously these objects were transferred automatically during a login to Fusion Client.

Defect Fixes

- **GDMS-8451** A performance issue was identified when adding drill hole samples in DHLogger. It was taking increasingly longer to add samples as the sample count rose. The cause of the issue has been identified and the issue has been resolved.
- **GDMS-8454** Resolved intermittent installation issues with Fusion (ODBC, and SQL LocalDB related).
- **GDMS-8456** Resolved minor issue where the main “close” button was inactive after performing a Checkin from the “Transfer In” window in DHLogger. Previously the workaround was to close the active Checkin window and then the user can exit the application.
- **GDMS-8465** An error was being returned when opening the Transfer In/Out windows in DHLogger with no valid Central or Fusion Remote DSN

configuration. Updated DHLogger and Samples Station to catch the error and returns more detailed information to the user.

- **GDMS-8469** Opening the “Projects” window while the drill hole logging interface was open in DHLogger would sometimes cause DHLogger to close unexpectedly. The cause of the issue was identified, and the issue has been resolved.

FusionX (March 2021)

Local Database Type (ASA to SQL Server)

The ASA Local database type has been replaced by Microsoft SQL Server Express LocalDB Edition. This will help solve connectivity issues and limitations with 3rd party applications. The change will also help solve performance issues that were often caused by the page/cache size limitations, Now that a single database type is supported with Fusion (SQL Server), it will simplify the source code and fast-track the development of new features.

Fusion Client Consolidation

The functionality that was previously available in Fusion Client has been moved to DHLogger, Sample Station, and Fusion Administrator, Users can perform “CHECKINS” and “CHECKOUTS” directly from DHLogger and Sample Station. Toast notifications are returned to the user after a successful data transfer from the collar page, Users will no longer be required to exit DHLogger / Sample Station and login to Fusion Client to perform data transfer operations (lists refresh, planned hole transfer, etc.). Administrative options have also been moved to DHLogger, Sample Station, as well as Fusion Administrator.

Enhanced Validation Module

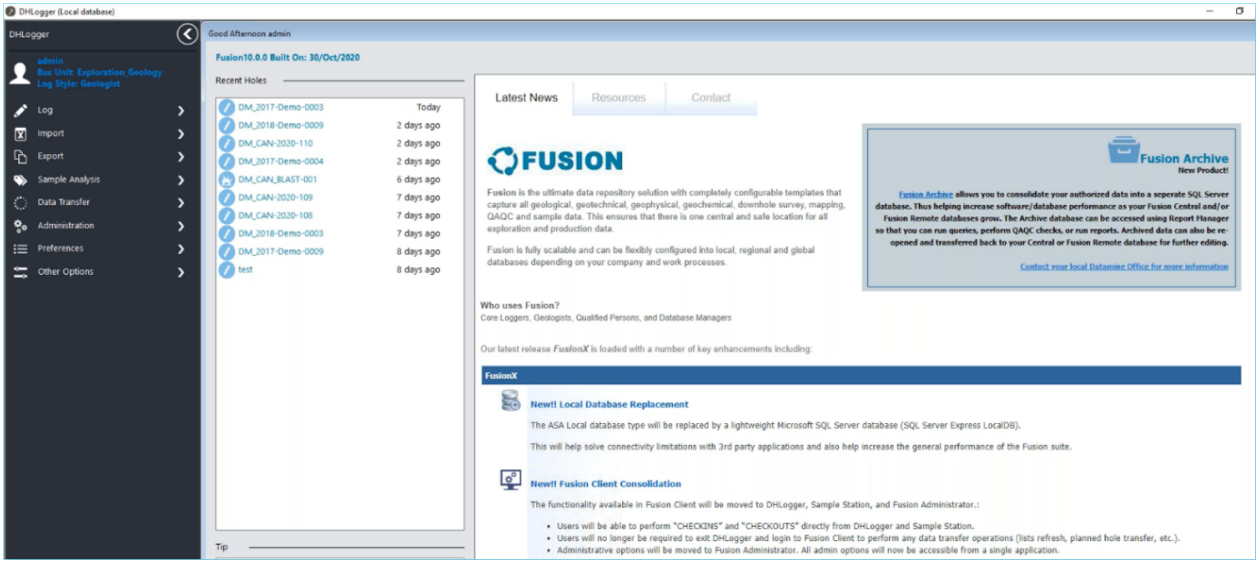
A new & fully configurable validation module is available in Fusion Administrator. Build your own validation rules to maintain data integrity and project workflows. Rules can be assigned to different business units & user groups. Validation can be performed at the logging, reporting, and authorization levels in both DHLogger and Sample Station.

Customizable Export Module

A new fully customizable export module has been introduced to Report Manager. Design your export by selecting any combination of queries and views in the Fusion database, Add your custom exports to DHLogger or Sample Station so that users can generate their CSVs at the click of a button. Custom Export visibility/access can also be controlled by business unit.

DHLogger & Sample Station User Interface Overhaul

New HTML introduction window to keep users informed on the latest news regarding Fusion. Tips section and resource page for added support tools. New accordion style menu added to both DHLogger and Sample Station. Menu is collapsible to gain more screen real estate, Find what you are looking for much quicker with FusionX.



Fusion Archive Database Solution

Archive your authorized data to a dedicated SQL Server database. Helps reduce the size of your production database and thus increase general database & software performance. Connect to your Archive database to query or run reports at any time with Report Manager. Archived holes can be re-opened and transferred back to the production database should there be a need to make modifications.

Enhancements

- **GDMS-6176** The Sybase ASA "Local" database type has been replaced by a SQL Server LocalDB database type. This significant change will help improve the general performance of the software and help solve connectivity limitations related to the ODBC driver.

- **GDMS-6959** A new Fusion Archive database solution has been introduced in FusionX. Clients will have the ability to move archived/authorized data from the production database to an archived database.
- **GDMS-7600** A new validation rules module has been added to DHLogger and Sample Station. Custom validation rules can be defined and run at the logging, authorization and/or reporting levels.
- **GDMS-7542** Functionality that was previously available in Fusion Client has been migrated to DHLogger and Sample Station. Users can now perform list synchronizations and data transfer operations directly from the logging applications. As such, Fusion Client has been deprecated.
- **GDMS-7549** A new “View Logs” window has been added to allow users to review transfer logs in both DHLogger and Sample Station.
- **GDMS-7030** A new HTML intro/landing page has been added to DHLogger and Sample Station. Users will be able to stay informed on the latest Fusion developments, reference a useful “tips” section, and also load recent drill logs using hyperlinks.
- **GDMS-7479** An enhancement has been made that allows you to customize the decimal precision to show when defining/configuring custom columns. The standard “Depth” field in the survey table can now be extended to 3 decimal places.
- **GDMS-5470** Re-ordering of columns is now saved for drill hole detail tables and samples. When using the drag/drop method to re-order columns, the widths are now stored in the database.
- **GDMS-7819** System Columns have been included in the list of columns to be allowed for use in a calculation formula. Previously, fields such as the rock type code were unavailable when building formulas.
- **GDMS-7467** A new User Preference has been introduced to DHLogger which will change the row colour to grey for rows that don't belong to the currently selected interval. The new preference is called "Highlight Current Interval".
- **GDMS-7572** Adjusting interval depths has been made easier by identifying intervals that can automatically be adjusted. If all sub intervals can be automatically adjusted, a prompt will be displayed informing the user of the sub interval tables and depths that can be automatically adjusted.
- **GDMS-7571** An enhancement has been made to the Planned Drill Holes module that will allow users to set some “Generation Preferences” that determine whether or not the planned Azimuth and Dip will be copied into the Collar of the generated drill holes.
- **GDMS-7570** An enhancement has been made that allows users to specify the Analytical Flow when creating a Standard in DHLogger and Sample Station. The picklist will be visible if "Enable Size Fractions" is enabled for your current

business unit, and the value defaulted to the Analytical Flow that has been defined as "Default for Standards".

- **GDMS-7527** A change has been made to the Drill Hole and Surface Sample Import to support DSN names that start with "FusionRemote". This is ideal when working with multiple Fusion Remote databases.
- **GDMS-7468** An enhancement has been added to allow users to manually add a block (or group) of Drill Hole QC samples at one time.
- **GDMS-7461** The Logged By, Original Creator, and Checked Out Computer columns have been added to the Projects window for Drill Holes and Surface Samples. This enhancement will help identify holes or samples that have been checkedout but the computer could not be identified.
- **GDMS-7355** A change has been made to the Lab Import module so that Lab Standards will now be imported even when the import file is identified as “Partial”. If you receive the prompt that your file is partial and you do not want to import Lab Standards, you may cancel the import and use the "Ignore Lab Standards" checkbox option.
- **GDMS-6967** Added the ability to drag overwrite and drag insert rows in the Details, Samples, and Blast Hole windows in DHLogger. This functionality is similar to an update or overwrite of data in Excel by using the drag/drop method.
- **GDMS-6957** A modification was made to the Lab Import module that will no longer perform a case-sensitive check on the Lab and/or Package fields in the import file.
- **GDMS-6694** A tooltip has been added when hovering over Hyperlink fields in DHLogger to inform users they must right-click to add a value.
- **GDMS-8310, GDMS-8192** A modification has been made to the Drill Hole Import module which ensures that the last_modified_by and last_modified_ date_time fields are updated in the parent table (drill_hole, sstn_surface_ samples) following an import of data.
- **GDMS-7683** The “Add” and “Delete” buttons have been relocated so that they are easily accessible in the Blast Hole module. Access to the buttons previously required horizontal scrolling when working with a business unit that has numerous assay columns.
- **GDMS-5693** A security update has been made to DHLogger and Sample Station to check the user role and to prevent modifications to data when a user’s role is “Role_Read_Only”. This role is typically assigned to auditors or other users who only require “read” access to the data.
- **GDMS-7387** An enhancement to our existing audit module has been made in Fusion Administrator. Records of any changes made to reference lists (pick

lists) in Fusion Administrator are new recorded in the DHL_AUDIT_LOGGING table.

- **GDMS-5821** The PFUSER table has been added as a list that can have its codes limited by business unit. Limiting the codes impacts the 'Entered By' field/dropdown in the Collar window.

Defect Fixes

- **GDMS-7940** A "Cancel" button has been added to the XYZ Calculator module. Users can now cancel the operation should the process take longer than expected.
- **GDMS-7905** An issue has been resolved with Re-Logging/archiving drill holes that contain Composite samples and where table linking is enabled.
- **GDMS-7747** The batch authorization window has been updated to identify if historical data is displayed and correctly update the sample status regardless of when the sample in the batch was imported.
- **GDMS-7892** The Drill Path and Borehole Path utilities now have the list of available holes filtered by project number when the "Project access Limited by Business Unit" preference is enabled.
- **GDMS-6340** A fix was made to prevent the reloading of a drill hole if it belongs to a project that has been CLOSED since the last time it was displayed (and the preference to Hide Closed Projects has been enabled).
- **GDMS-8079** A check has been added to the Table Mapping module to confirm that the source/destination file exists before attempting to connect to the file to make column mapping changes.
- **GDMS-7654** A fix was made to the Drill Hole Import module to ensure that the codes being validated are specific to the current import session.
- **GDMS-7618** The Dispatch Samples Groups maintenance list has been modified to properly cascade changes to the Group Name so that existing sample assignments are maintained and not deleted. As well, the message confirming the deletion of groups has been changed to ensure the user is aware that assignments will also be removed.
- **GDMS-8232** The geology log was showing a black colour for the intervals when no colour was specified. Updated the geology log to show no colour to match the behavior of the rock type tree.
- **GDMS-8306** The Blasthole module wasn't correctly handling empty or null datetime data from the API causing an error. Updated the Blast hole module to correctly account for null or empty data in datetime columns.

- **GDMS-8303** It was found that users couldn't select a row on the Composite tab when the sample has fractions or is a fraction. DHLogger has been updated to allow the user to select the row but prevent editing of the sample number column.
- **GDMS-8302** An error was occurring if the blast hole module was selected as the default module, but the user didn't have access to the window. DHLogger has been updated to account for this situation.
- **GDMS-5639** A modification has been made to the Checkin process of holes that will reset the name of any archived holes that did not previously transfer successfully. This change will ensure that those archived holes will transfer during the next Checkin.
- **GDMS-5480** A fix has been made to the lab import module in DHLogger and Sample Station to account for file names that contain special characters.
- **GDMS-5718** The “Mean” analysis option has been added to all applicable charts in Report Manager.
- **GDMS-8031** Resolved a synchronization issue when rock type codes are updated in the Central database using Fusion Administrator. Those changes are now correctly synchronized to the Fusion Remote and Local databases.
- **GDMS-7991** An issue was identified when importing data into Standalone tables which only contained columns that are linked to reference tables. The cause of the issue was found and resolved in this release.
- **GDMS-7960** A modification was made to the Drill Hole Import module to ensure that 'case-sensitive' checks are not made on numeric columns linked to reference tables.
- **GDMS-7726** Resolved an issue when running the “Custom Formula Recalculation” tool in DHLogger and at least 1 formula includes the AVG (Average) function.
- **GDMS-7706** An issue has been resolved with the lab import module when a certificate only contains a single sample and that sample happens to be a standard which was sent blindly to the lab.
- **GDMS-7643** Resolved issue when attempting to import composite samples into DHLogger which contain overlapping records. If the “Allow overlaps” option is enabled for the sample type, this will now be allowed.
- **GDMS-7645** An issue was identified with the “Create Default Row” option for standard tables in DHLogger. The option will now work correctly for all standard tables such as Texture, Alteration, and Mineralization.
- **GDMS-7628** An issue was found and corrected with the overlap validation of major intervals when minor intervals are also logged.

- **GDMS-7597** A modification was made to the Sample Dispatch module to ensure that samples assigned to a Group are saved correctly when the “Apply” button is pressed before the “OK” button.
- **GDMS-7595** Resolved issue with intermittent error when running the configuration report within the Business Units configuration window in Fusion Administrator.
- **GDMS-7593** An issue has been resolved with the creation and display of checkbox columns in the Sample table in DHLogger.
- **GDMS-7576** Resolved issue with the import module in Sample Station. Previously, the “Location ID” was set to NULL causing a display issue in the logging form in Sample Station.
- **GDMS-7566** An issue has been resolved with the “Is Required” validation rule for columns in the Collar (Drill_Hole table) window in DHLogger.
- **GDMS-7529** An issue was found with the Drill Hole Import module where importing to a Standalone table would hang at "Logging Problems". The cause of the issue has been identified and corrected.
- **GDMS-7513** Resolved an issue where perimeter validation was not being enforced for coordinates when a SHP file is used.
- **GDMS-7472** A fix was made to DHLogger to ensure that the Coordinate window is not redrawn with DEGREES columns when a user selects a hole (which uses DECIMAL) from another project while they are on the Coordinate window.
- **GDMS-7462** A change was made to ensure that the text of the first column will be auto-selected when entering a new row in DHLogger details tables. The issue was initially raised by a client who reported that the “Depth” field was not automatically selected/highlighted when adding a new survey record.
- **GDMS-7442** An issue was found where the original_result_number and result_after_math columns in the QAQC historical table were being truncated to four (4) decimal places during a lab import. Updated the definition of the original_result_number and result_after_math columns to allow up to six (6) decimal places.
- **GDMS-8085** An issue was found where generating planned drill holes containing samples was throwing an error related to the “number of bags” column. The issue has been resolved and the proper default has been set for the column.
- **GDMS-8242** A change was made to the Business Unit Administration module to cascade the update/delete of business units that are referenced by Report Manager objects.

Known Issues & Limitations

- The CoreShed Management application is not supported in the first release of FusionX as a result of the local database change (Sybase ASA to SQL Server). Support was introduced in Service Pack 2.0
- Fusion Connex is no longer supported as a result of the Local DB replacement and recent changes to the password encryption model.
- The MineMapper 3D application is not supported with Fusion due to the local database change (Sybase ASA to SQL Server). Contact us today for more information regarding Studio Mapper and our integration tools.
- With the Sybase ASA Local database being phased out, any preferences tied to the database will need to be re-implemented in the new SQL Server Local DB after upgrade (i.e. import profiles, columns ordering/resizing, user preferences).
- There is intermittent issue related to the new SQL Server LocalDB if a user tries to login to DHLogger/Sample Station and there is another user currently logged in to the same computer. If you are experiencing this issue, it is suggested that all inactive users sign out. Note that a reboot may be needed afterwards.
- The translations for the Finnish & Spanish languages are not yet up to date. The translations will be completed in a future update.

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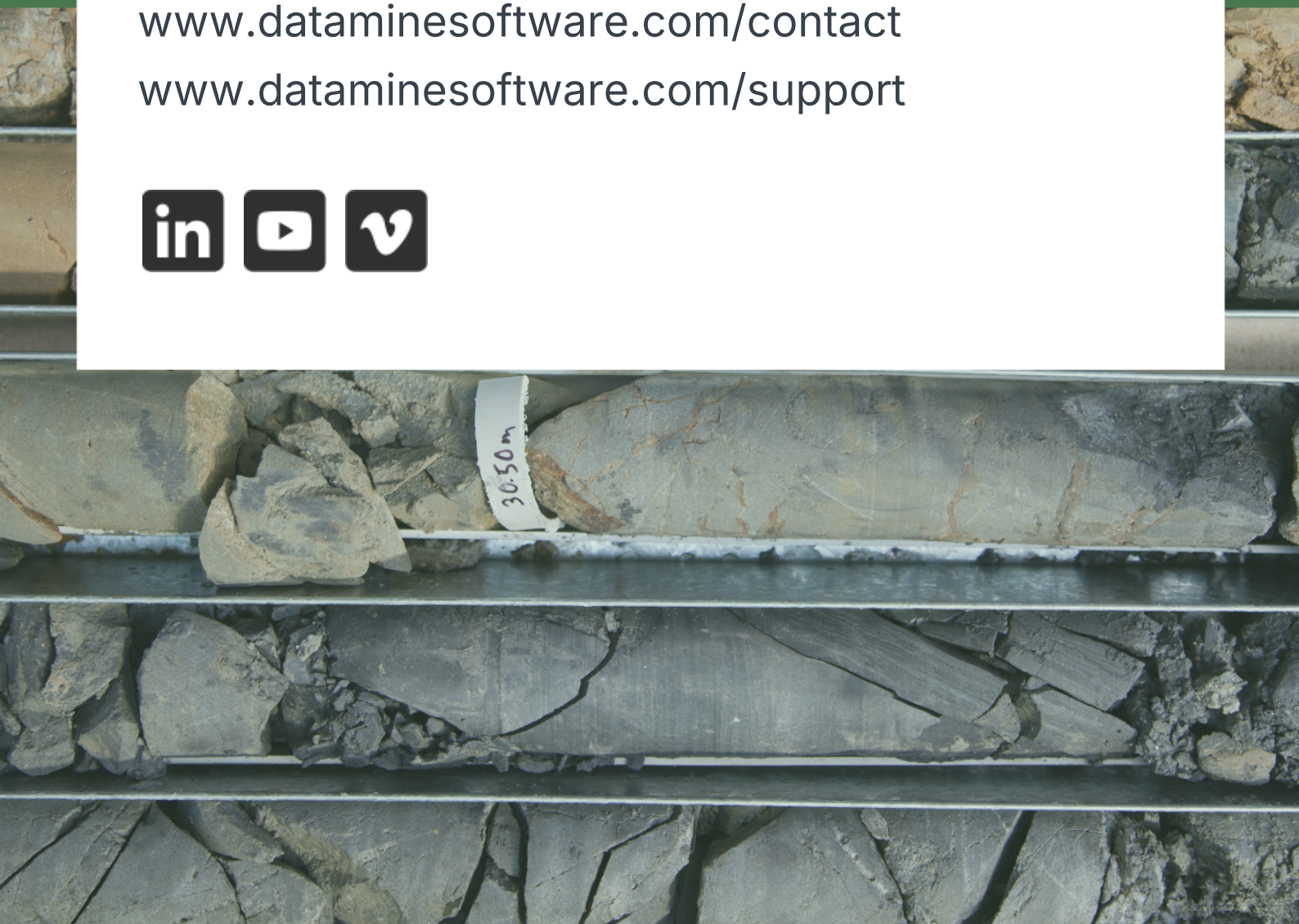
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