DataVentures

Data Ventures P Ltd.

geoXpedite

Product Description Document

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v2.3

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Overview

Geoxpedite is Geological Information System (GIS) that integrate disparate data into a single centralized location which allows different users to collaborate and draw reports at the same time. Centralized database architecture allows multiple users to access the same information simultaneously. Geoxpedite ensures complete accuracy and quality, data integrity and data security with capability to track all transactions done. It has a capability to handle all geological data activities some of them are listed below

- Drillhole Collar Data
- Geological Data
- Geotechnical Monitoring Observations
- Sampling Information and Results

Doesn't matter if you are working from office or are at any remote location, geoxpedite gives you an intuitive and easy to use web interface for dynamic querying and data search facility. Our predefined reports will ease your data need and present it on an easy to understand grid view with capability to export to excel. Our UI is designed to give you more freedom to invest your time in your core business rather than learning a whole new system. Here are some of the key benefits to your business

- Collaboration Across Your Team
- Data Integrity
- Data Security
- Accuracy
- Data Quality
- Efficiency in Data Handling
- Productivity and Less Human Error

Product Description

geoxpedite system is categorized mainly in five modules mentioned below. These five modules are further sub categorized into sub modules.

1. Admin Module
2. Master Set Up
3. Drilling Module
4. Geochemical Sampling Module
5. QAQC Module

Admin Module

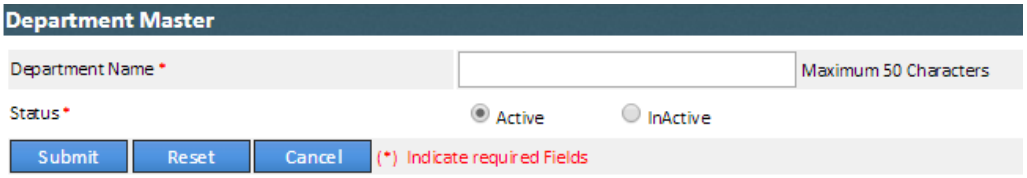
Admin module is designed for administrate the system functionality like creating new user and defining and assigning role rights, adding deleting organizational data like departments designations etc. Admin module is further categorized into sub modules which are mentioned below-

General Administrator

This module facilitates creation of new users and maintains their rights for accessing the system. This module is further categorized into sub categories as mentioned below.

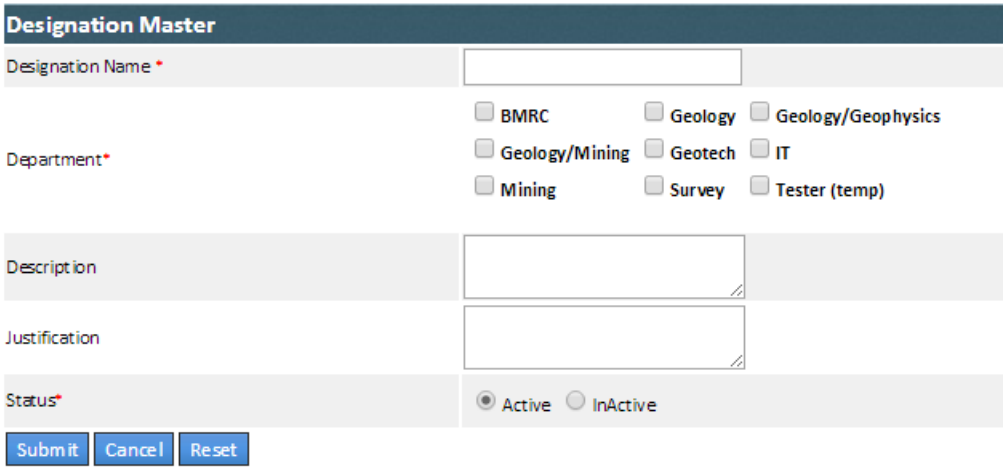
1. Department Master

Department is used to create new department in the company. This will be further used in Employee Master while creating new employee. In Employee Master it is mandatory to define the employee's department. Example: Geology/Mining, Accounts department etc.



2. Designation Master

Designation is used to create new designation of the employees. This will be used in Employee Master while creating new employee. In Employee Master it is mandatory to define the employee's designation. Example: General Manager, Manager, Surveyor, Geologist etc.



Here department is must to select to create a new designation. This indicates that this designation belongs to selected department and a single designation can belongs to multiple departments.

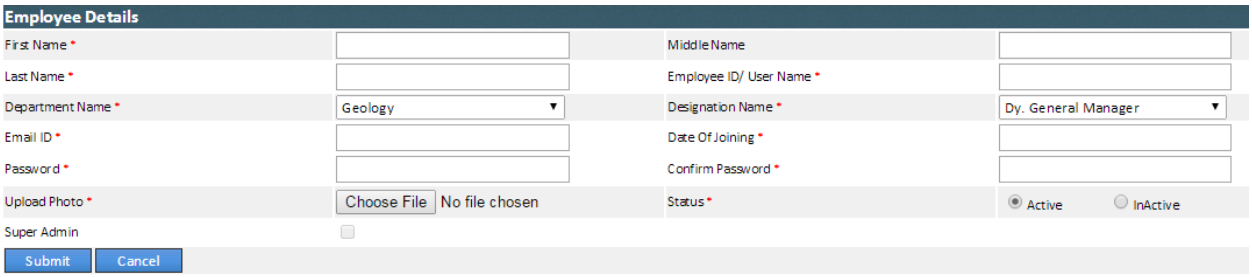
3. Employee Master

Employee Master is used to create new employee with his/her basic details like-

a) First Name, Middle Name, Last Name etc.
b) Employee ID - In this user must enter the company employee number as this will later be used as user ID to access the system. It should be unique.
c) User has to set his/her strong password and this will be user's login password of the system.

d) Here is the option to make a Super Admin, who will be assigned to allocate the rights of every user of the system.

e) If user will not change his/her password within 24 hours, user will be blocked and can be unblocked by admin through Blocked Users page.

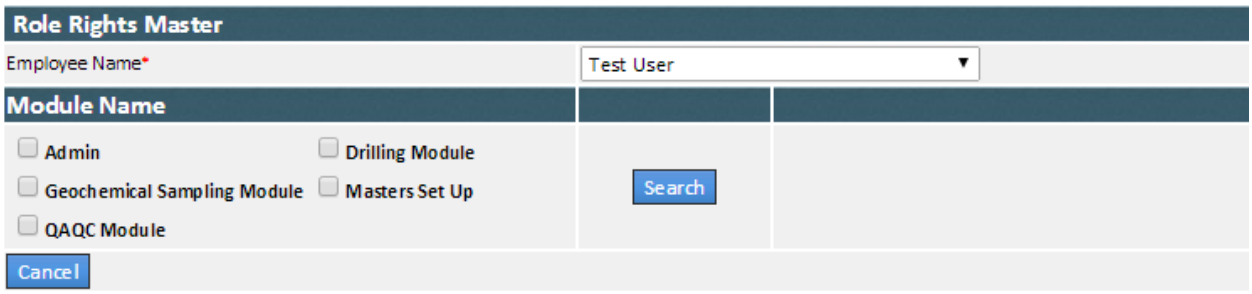


4. Role Rights Master

Role Rights master is used to assign the pages and modules based level of work. This feature restricts the unwanted and unauthorized access to the precious data stored within the system. Without setting rights of user, user can't view anything at home page. Admin can set rights as mentioned below.

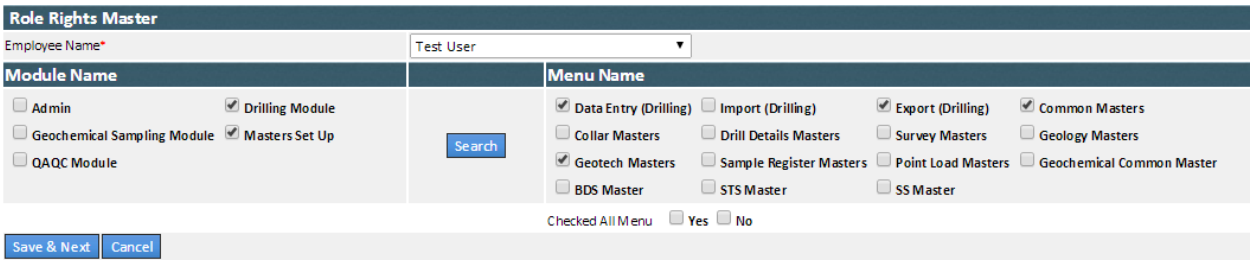
a) Select the employee's name whose roles and rights are to be set.

b) Select the module names on which user have to work. Then click on search.



c) According to the modules chosen in step b, a list of Menu will be displayed after pressing search button.

d) Now select the menu on which user has to work. Then click on Save & Next button.

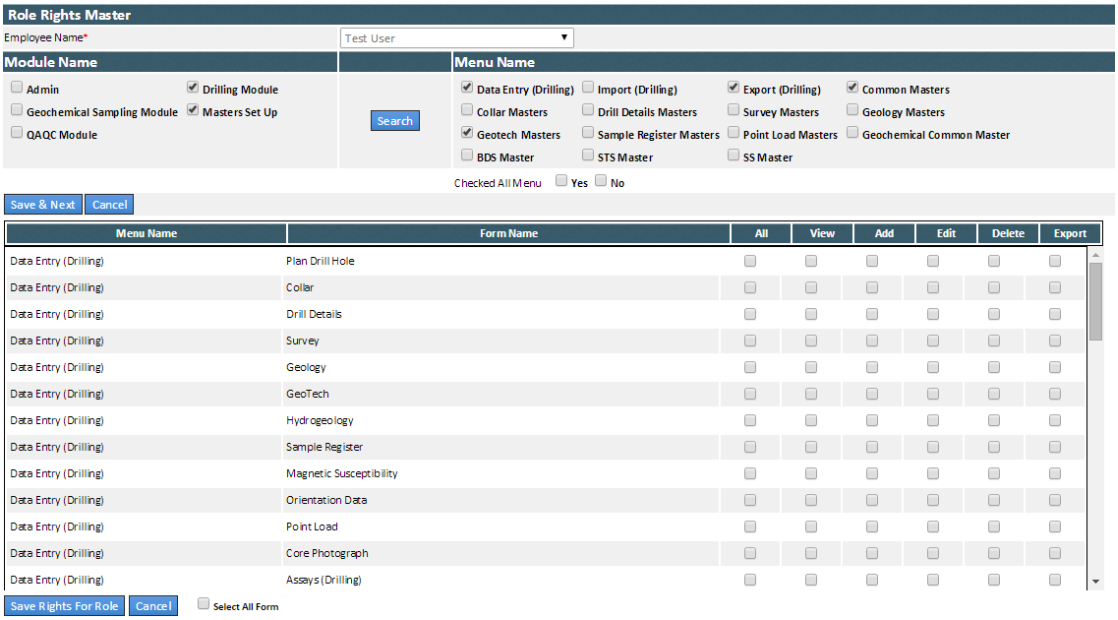


e) After clicking on Save & Next a window will be displayed below the Save & Next Button. Now you can see there is a list of forms with five options to choose from- All, View, Add, Edit, Delete, and Export. This is the level of access any user deserves as per the work area.

f) Admin can set the rights of a form for a particular user like if select **View** only then user can view the records only. User can not Add, Edit, Delete, Export any record.

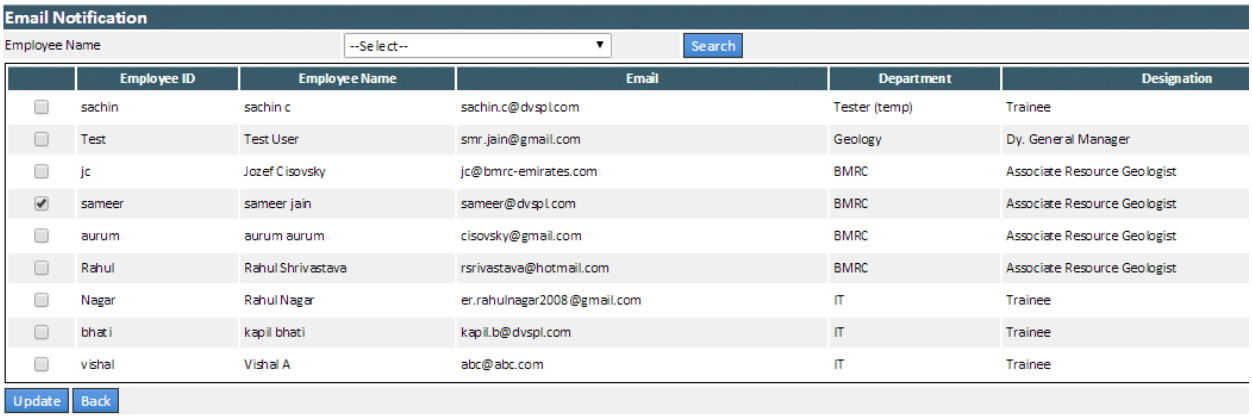
g) Similarly if user selects View and Add only then user can View and Add new records but can't Edit, Delete, Export any record.

h) After selecting forms click on Save Rights for Role button.



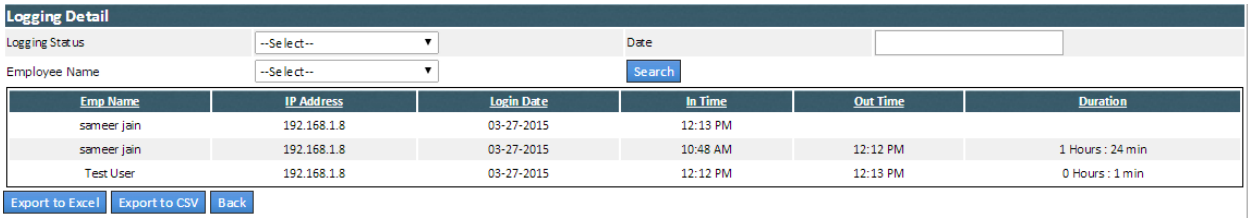
5. Email Notification

Email Notification is used to notify users about the transaction done within system. In this page a list of employees with their email is listed. Admin can select those employees who need to be notified about the transactions done by other users. For example, if someone deletes any record from Sample Register then an email will send to all employees who are selected in Email Notification form.



6. Logging Detail

Logging Detail page lists details of login logout time and duration of their sessions of all users in the system.

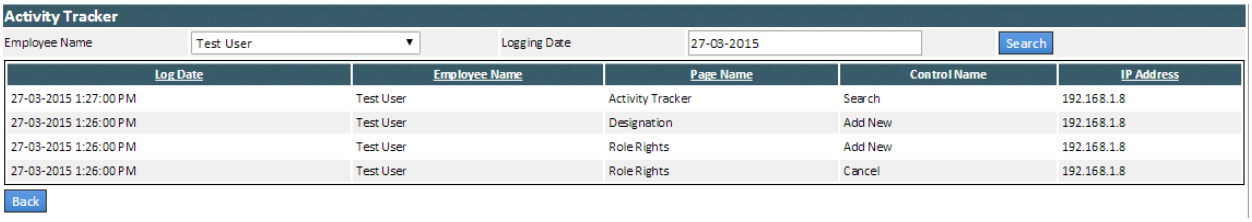


7. Reset Password

Admin can reset any user's password by selecting the employee name and then click on Reset Password button. An email will send to respective employee with his/her new password.

8. Activity Tracker

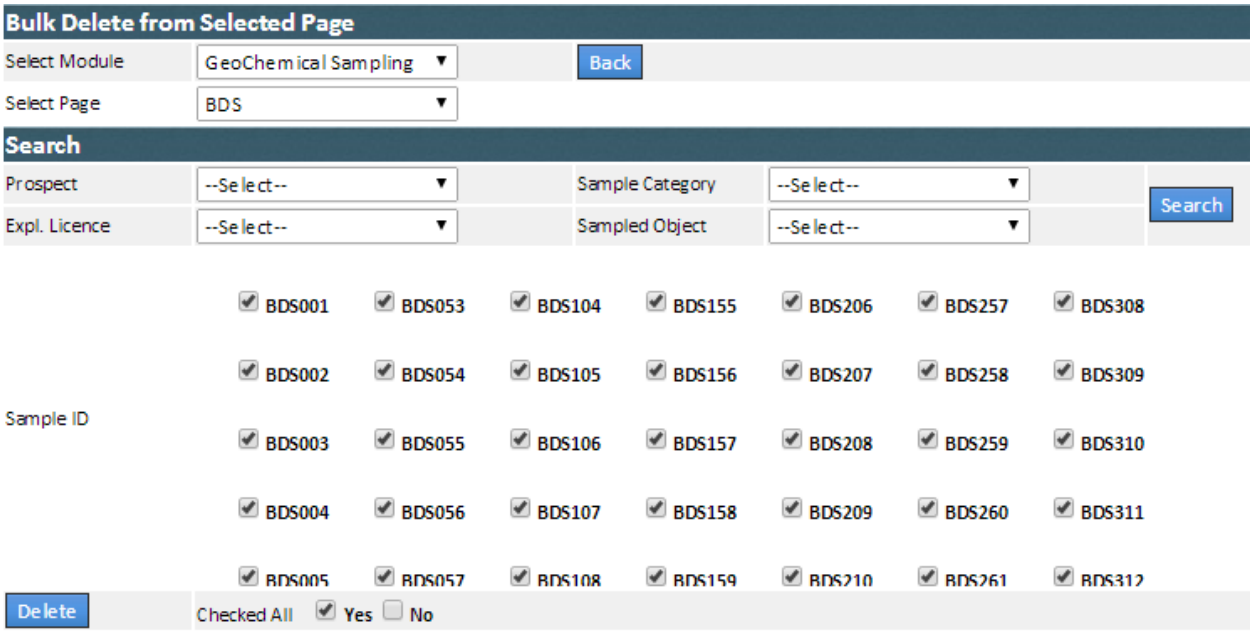
Activity Tracker allows the admin to track the user's activity on system. Like on which form he/she working, what button he clicks, does he/she edit/delete any record. So from this form activity of any user of any date can be traced easily.



9. Bulk Delete

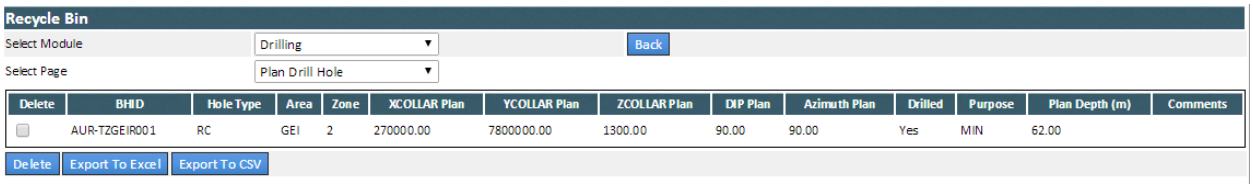
Bulk Delete can be used to delete bulk records from any table. To delete bulk records select module name Drilling/Geochemical sampling then select the page name from where you want to delete bulk records.

After selecting page name a window will display with the list of all BHID's/Sample Ids. Select multiple ids and click on delete button. All the selected records will be deleted from the table.



10. Recycle Bin

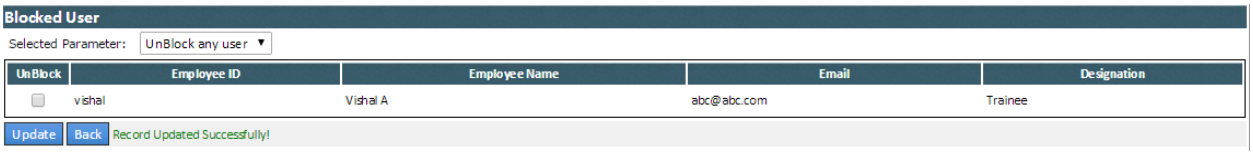
Recycle bin is used to delete already deleted records permanently or restore deleted records from the system. If user deletes any record from any table, it will be stored in recycle bin. Means it will not delete permanently from the system. Now user can delete it permanently from system or can restore that record in its respective table in the system by selecting module name then page name from where he/she wants to delete permanently then a list will display with all deleted records. Thereafter user can select the records and click on delete then records will be deleted from the system permanently. If user want to restore the records, select the records wants to restore the click on Export to CSV button. User can import that CSV file into its respective table.



11. Blocked Users

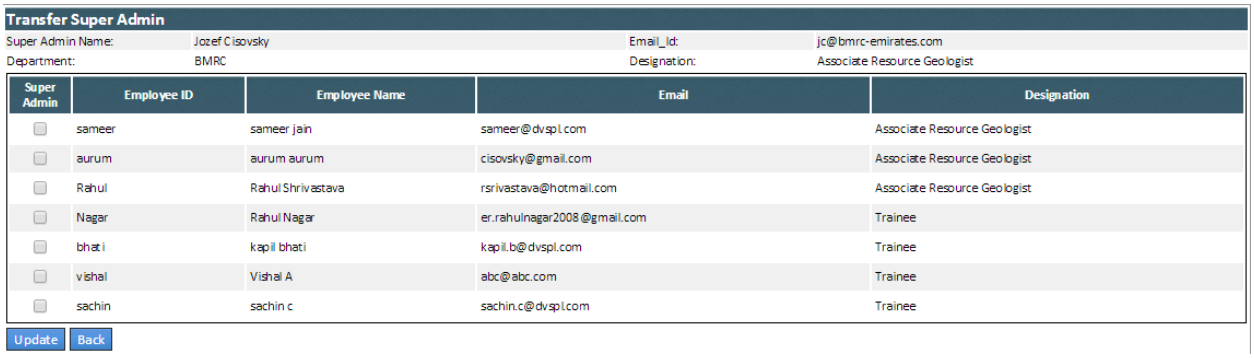
If any user does not change his/her password within 24 hours after new user creation then user will be blocked automatically. Admin can unblock user from this page. If any user does unwanted activity in system, admin can block that user from same page by selecting parameter

If Block any user is selected then list of all employees will be shown and admin can select the user then click on Update, User will be blocked. Admin can unblock any user by selecting Unblock any User from drop down. The list of all blocked user will visible. Select the user which you want to unblock then click on Update button, now user can access the system.



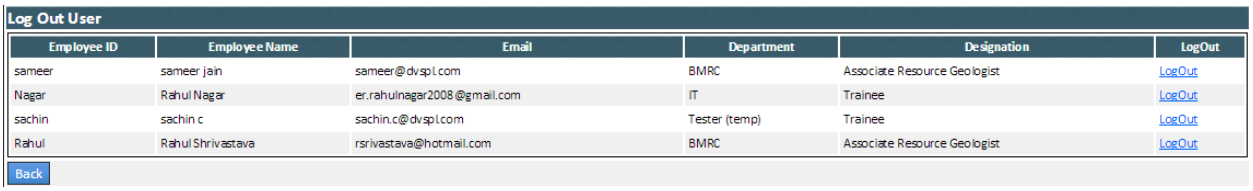
12. Transfer Super Admin

Only one super admin exist in the system who has all the rights to access all modules and sub modules of the system. Super Admin role can be transferred from current super admin to new user by selecting the new user as super admin then click on Update button. Super admin will be changed successfully.



13. Log Out User

By this page admin can logout any current user if he is ideal from long time.

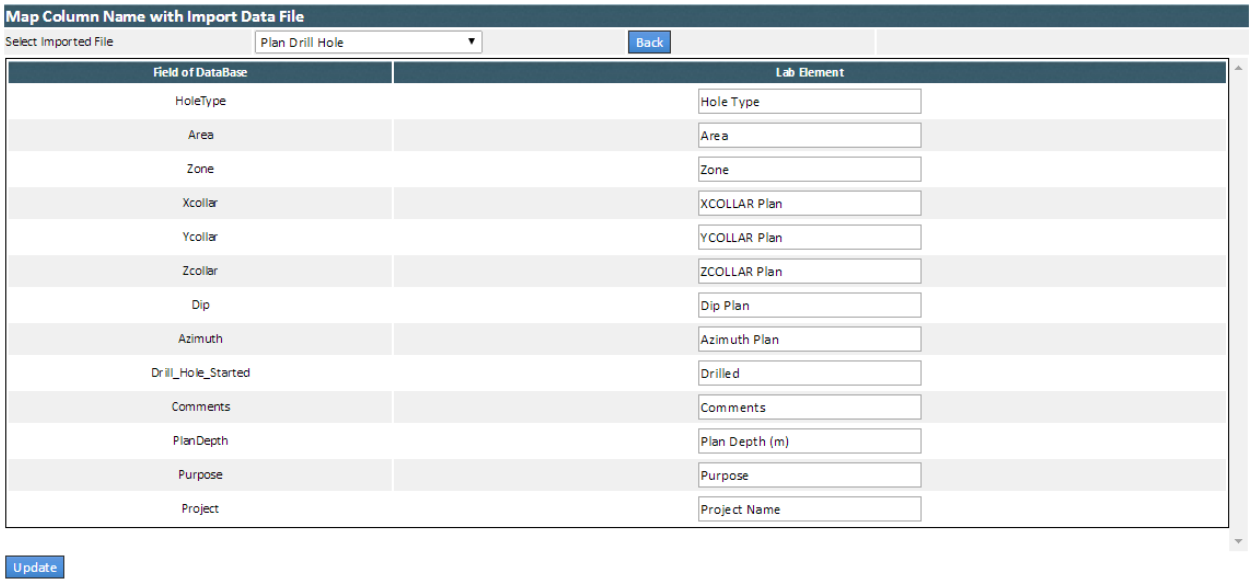


Map Tables Fields

1. Map Tables

Map Table is used to map the column names of excel template to column name of system database tables of each Import section. If column name of excel template does not match with the column

name entered in map table's (Lab element section) then user cannot import data. So column names in excel template has to be equal to map tables of Lab element columns. That indicates that the column name of our excel template is equal to column name of our system database.



2. View Updated Records

It is used to track the edited records of Drilling/ Geochemical Sampling modules. Suppose any user edits a Bore Hole id from Plan Drill Hole page, the record before manipulation can be seen here. If any user edits any record by mistake, it can be seen here for correction. It is categorized into two sections –

- Drilling
- Geochemical Sampling

Master Set Up

Master Set Up is a onetime exercise to store your master data in database by which can be used in transaction forms, which enhance accuracy and reduce the duplicity of data. This module is categorized into two sub modules. Master entry is simple data entry in which most of the masters have two fields to enter- Code/Name and their description. However two masters are different and used for validation purpose are explained below.

- Drilling Module
- Geochemical Sampling Module.

Drilling Module

Drilling module is further categorized into some other sub modules as mentioned below.

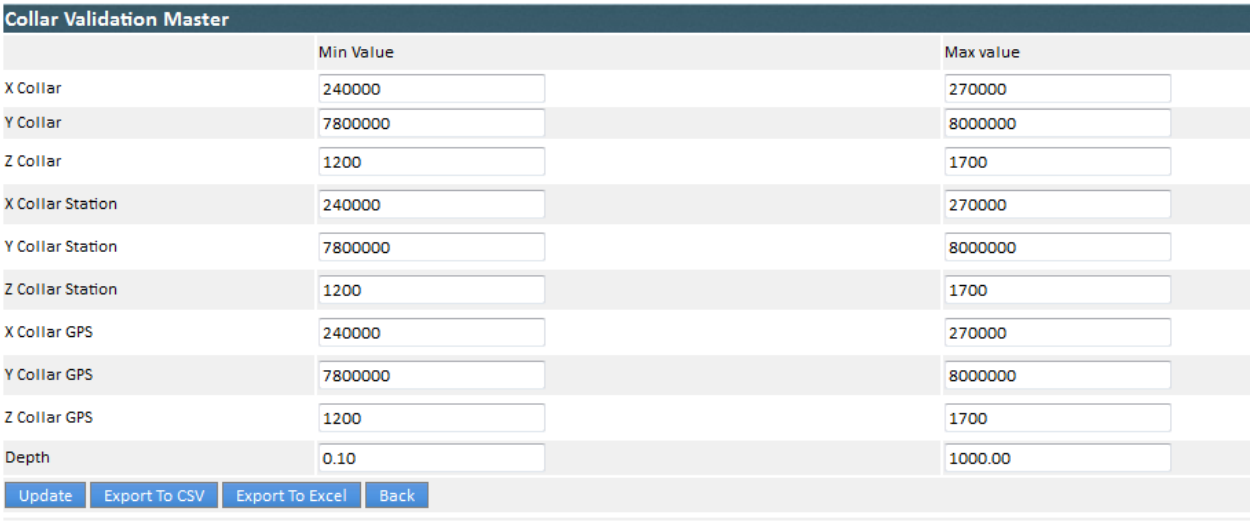
Common Masters

1) Project Master
2) Area Master
3) QA/QC Master
4) Standard Id Master
5) QC Verification Master
6) Hole Type Master
7) Hole Purpose Master
8) Hole Diameter Master
9) Discontinuities Fracture Density Master
10) Zone Master
11) Tag Master

Common Technical Masters

1) Hole Status Master
2) Collar Validations :

   This Master is used to set the minimum and maximum value of X Collar, Y Collar, Z Collar, X Collar Station, Y Collar Station, Z Collar Station, X Collar GPS, Y Collar GPS, Z Collar GPS and Depth. User can enter the values (In COLLAR form) between min and max values set in Collar Validations Master.



Drill Details Masters

1) Contractor Master
2) Casing Size Master

Survey Masters

1) Downhole Survey Method

Geology Masters

1) Lithology Master
2) Color Master
3) Mineralization Master
4) Oxidation Code Master

Geo-tech Masters

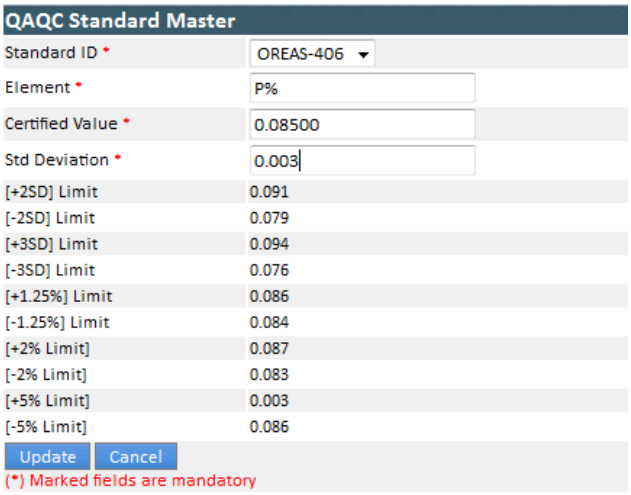
1) Defect Origin Master
2) Defect Sets Master
3) Defect Type Master
4) Geo-tech Zone Master
5) Infill Min Master
6) Infill Strength Master
7) Orientation Master
8) Rough Master
9) Rock Strength Master
10) Rock Type Master
11) Weathering Master

Sample Register Masters

1) Sampling Master
2) Sample Type Master
3) Sample Category Master
4) Sample Conditions Master

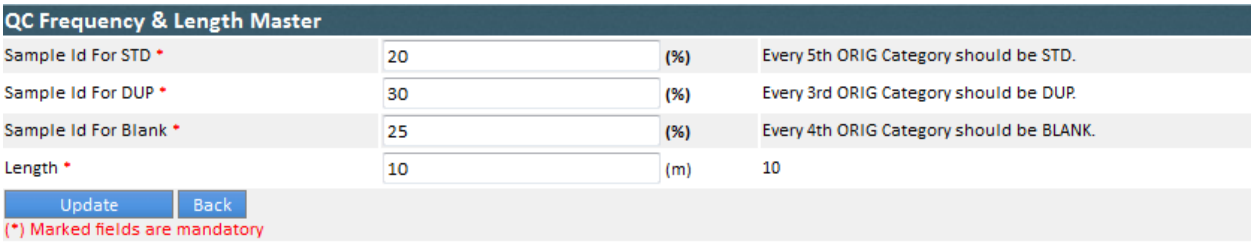
QAQC Standard Master

This Master is used to calculate standard deviation of Standard Id for each element. To calculate standard deviation select Standard ID from dropdown, put the name of element and enter the certified and Std deviation values, Standard deviation value of different limits will be calculated automatically. This will help to create QAQC graphs.



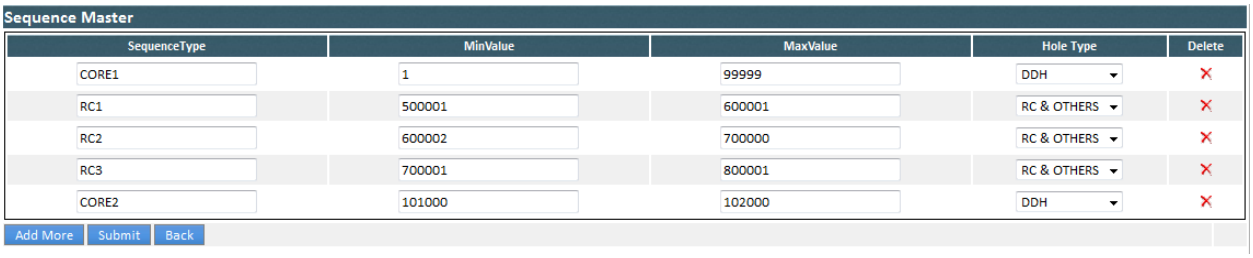
QC Frequency & Length Master

This Master is used to indicate frequency of inserting STD, Duplicate and Blank samples automatically in the Sample Register. Let's say frequency of Sample Id for Standard is 20%, by this every 5th ORIG category should be STD, If frequency of Sample Id for Duplicate is 30%, by this every 3rd ORIG category should be DUP and If frequency of Sample Id for Blank is 25%, by this every 4th ORIG category should be Blank and Length indicates the maximum length between samples.



Sample Sequence Master

Here user can create multiple Sample Number sequences by which user can work on various sample sequences like Core1, RC1, RC2 etc. If any user is working on Core1 sequence then another user cannot use the same sequence at the same time, system will assign another free (which is not used by any user at the same time) sequence automatically.



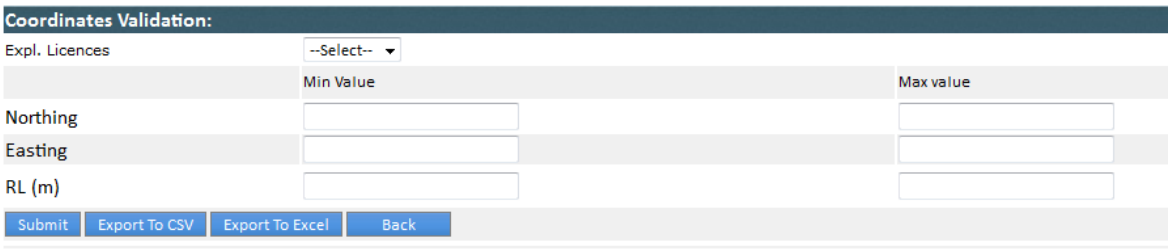
Point Load Masters

1) Failure Mode Master
2) Moisture Master
3) Test Type Master
4) Dir Applied Load Master

Geochemical Sampling Module

Common Masters

1) Prospect Master
2) Expl. Licenses Master
3) Sample Category Master
4) Standard Id Master
5) Sampler Master
6) Rock Type Master
7) Mineral Master
8) Moisture Master
9) Coordinate Validations Master
10) Each Expl. License has its separate coordination. Here we are setting the Easting, Northing, RL (m) minimum and maximum value as validation. To set the values select Expl. Licenses from dropdown and put the Easting, Northing, RL (m)'s minimum and maximum value.



BDS Masters

1) Sampled Object Master
2) Sample Type Master
3) Sampling Purpose Master
4) Regolith Master
5) Oxidation Master
6) Weathering Master
7) Alteration Type Master
8) Alteration Intensity Master
9) Boxwork Shape Master
10) Carbonates Master
11) Vein Pattern Master
12) Structures Master

STS Masters

1) Sample Type Master
2) Sampling Purpose Master
3) Stream Type Master
4) Sediment Composition Master
5) Sediment Fraction Master
6) Nature Of River Master
7) Water Master
8) Gradient Character Master
9) Stream Order Master
10) Packing Master
11) Texture Master
12) Slit Master
13) Pebbles & Cobbles Shape Master
14) Sample Site Trap Master
15) Trap Quality Master
16) Bottom Master

SS Masters

1) Sampled Object Master
2) Sample Type Master
3) Sampling Purpose Master
4) Outcrop Lithology Master
5) Float Lithology Master
6) Soil Horizon Master
7) Soil Type Master
8) Topography Master
9) Soil Texture Master
10) Soil Origin Master
11) Sample Site Master

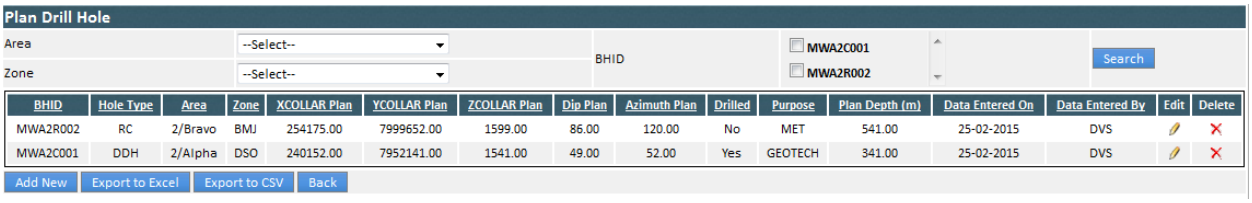
Drilling

Data Entry

A brief description of all sections in data entry module is defined below.

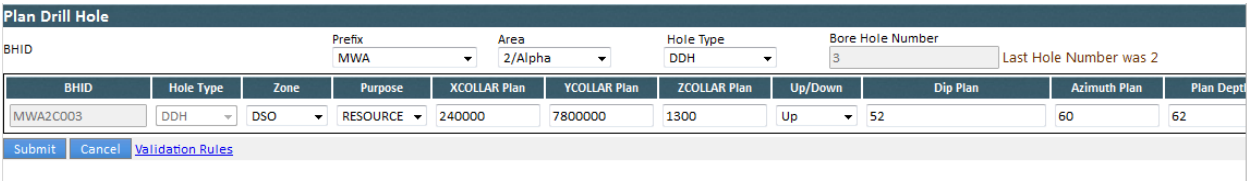
1. Plan Drill Hole

Plan Drill hole is used to create new Bore hole ID (BHID). On click on Plan Drill Hole in Menu, User can see previously saved BHID's with edit option.



To create new BHID, click on Add New button and follow the validation rules to fill mandatory fields.

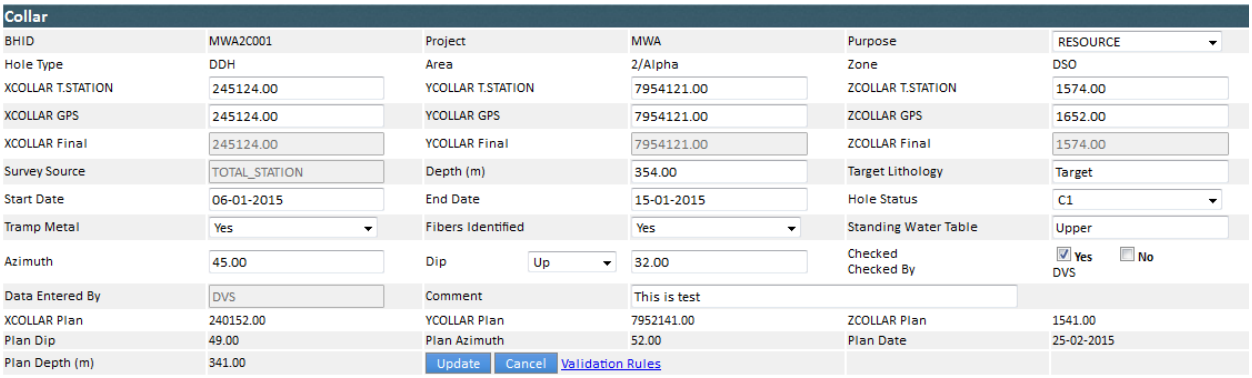
Select Prefix (Coming from prefix master), Area (Coming from Area master), Hole type (Coming from Hole type master) and increment of last Bore Hole Number saved in database. Then BHID will be created automatically. Follow the validation rules to submit mandatory fields.



2. Collar

On click on Collar section in Menu, User can see already saved BHID's with edit option.

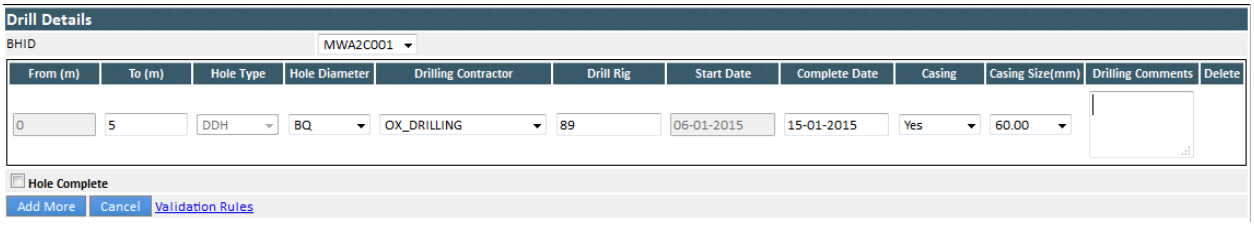
To fill details for new BHID click on Add New Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Collar. You can set **X Collar, Y Collar, Z Collar, X Collar Station, Y Collar Station, Z Collar Station, X Collar GPS, Y Collar GPS, Z Collar GPS** and Depth minimum and maximum limits in **Collar Validation Master**.



3. Drill Details

On click on Drill Details in Menu, User can see previously saved BHID's with edit option.

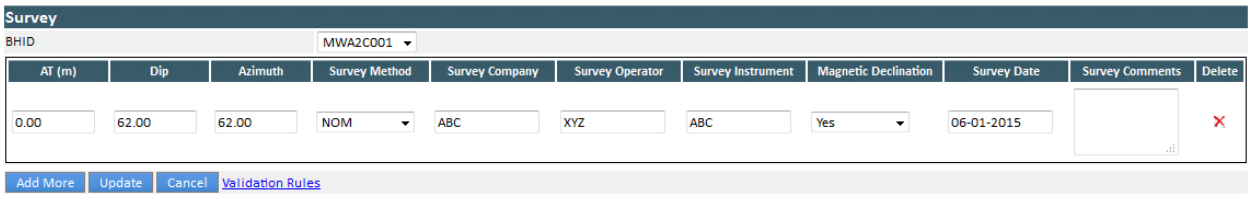
To add new details for a particular BHID click on Add new Button. User has to follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Drill Details.



4. Survey

On click on Survey in Menu, User can see previously saved BHID's with edit option.

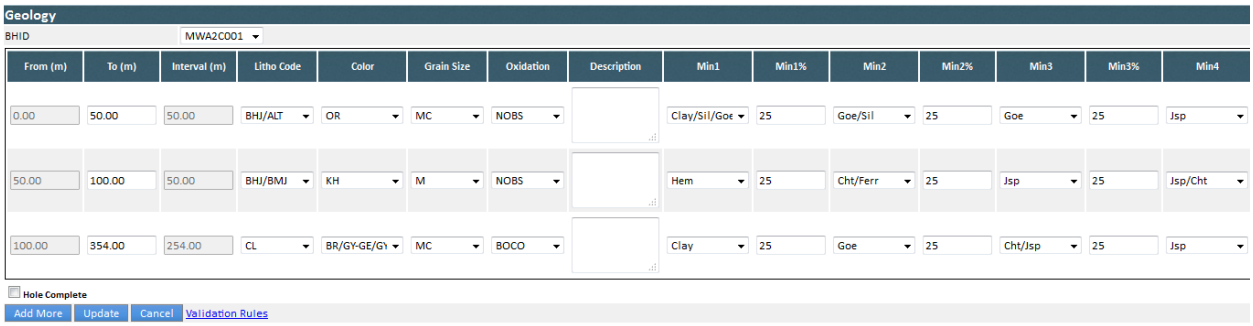
To add new details for a particular BHID click on Add new Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Survey.



5. Geology

On click on Geology in Menu, User can see already saved BHID's with edit option.

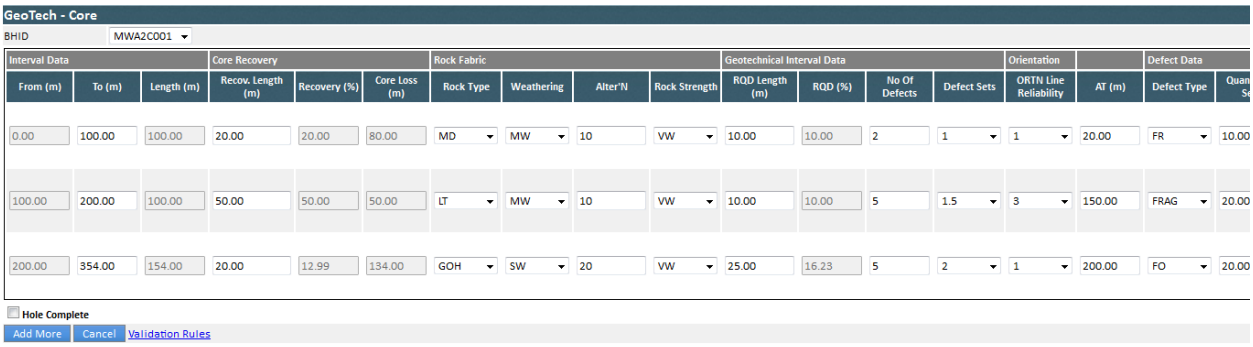
To add new details for a particular BHID click on Add new Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Geology.



6. Geo-tech

On click on Geo-Tech in Menu, User can see previously saved BHID's with edit option.

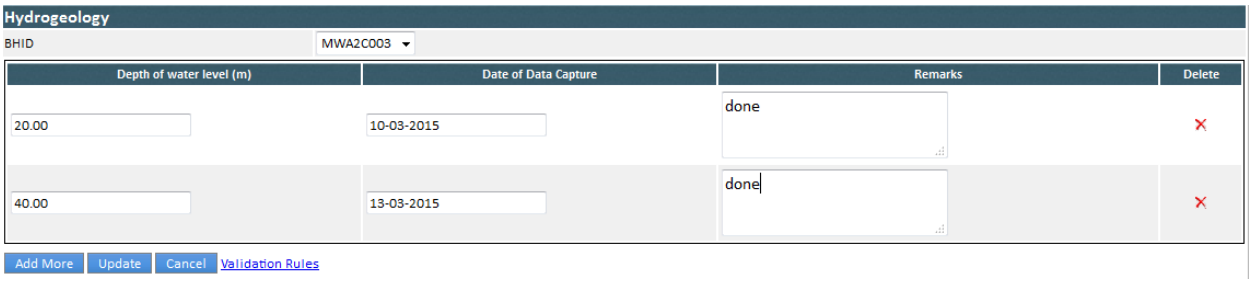
To add new details for a particular BHID click on Add new Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Geo-Tech.



7. Hydrogeology

On click on Hydro in Menu, User can see previously saved BHID's with edit option.

To add new details for a particular BHID click on Add new Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Hydro.



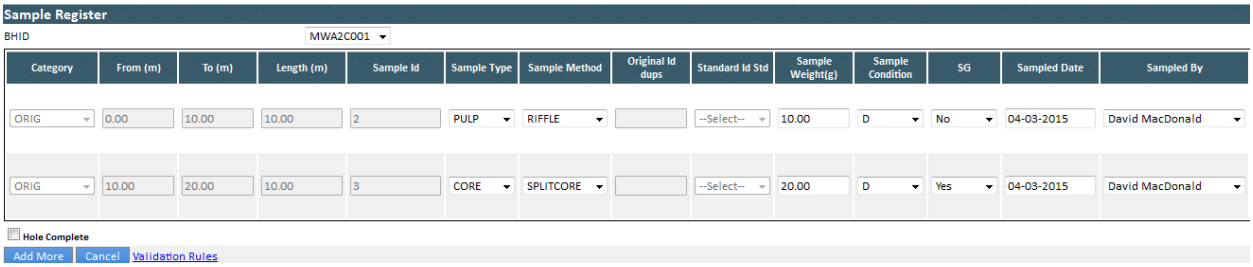
8. Sample Register

On click on Sample Register in Menu, User can see previously saved BHID's with edit option.

To add new details for a particular BHID click on Add new Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Sample Register.

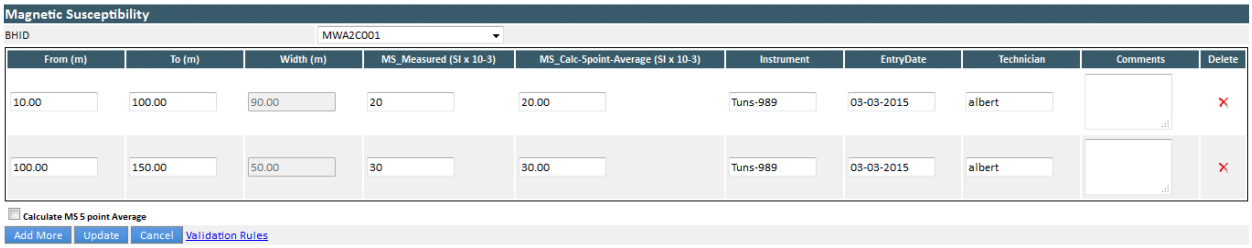
User can change the frequency of STD, DUP and BLANK in Sample Id Interval Master.

User can work on various sample sequences like Core1, RC1, RC2 etc. by using Sample Sequence Master. If any user is working on Core1 sequence then another user cannot use the same sequence at the same time, system will assign another free(which is not used by any user at the same time) sequence automatically.



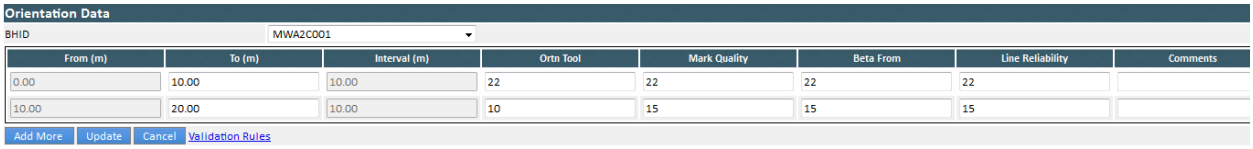
9. Magnetic Susceptibility

On click on Magnetic Susceptibility in Menu, User can see previously saved BHID's with edit option. To add new details for a particular BHID click on Add new Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Magnetic Susceptibility.



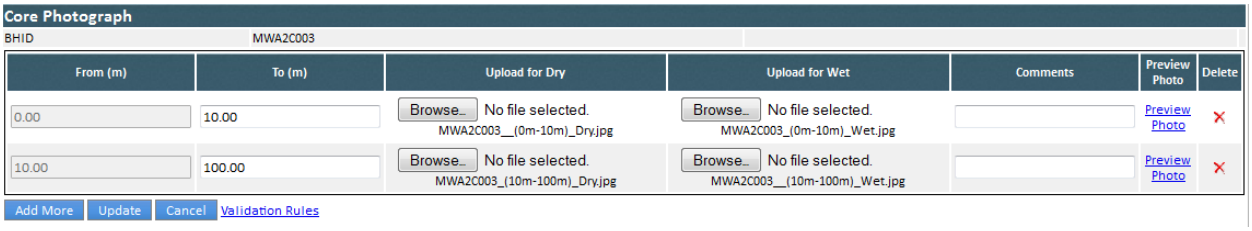
10. Orientation Data

On click on Orientation Data in Menu, User can see previously saved BHID's with edit option.
To add new details for a particular BHID click on Add new Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Orientation Data.



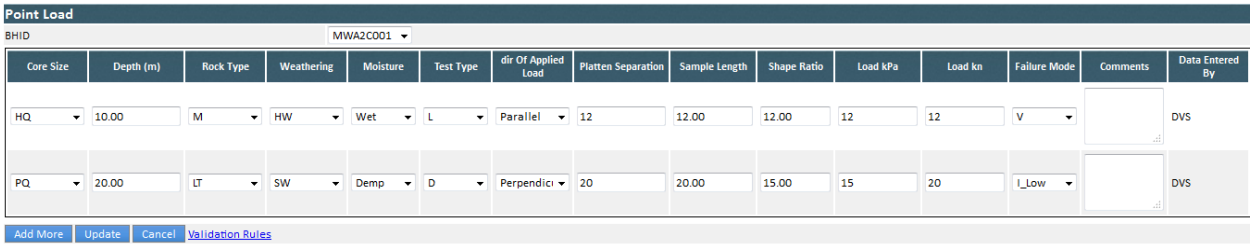
11. Core Photograph

On click on Core Photograph in Menu, User can see saved BHID's with edit option.
Photo name format is specific. Each photo name has to be in the same format like MWA1AC001_(0m-1m)_Wet or MWA1AC001_(0m-1m)_dry.
User can upload bulk photographs by clicking on Bulk Upload link.



12. Point Load

On click on Point Load in Menu, User can see saved BHID's with edit option.
To add new details for a particular BHID click on Add new Button. Please follow all validation rules to fill the mandatory fields. After filling all the mandatory fields click on submit button to save this BHID in Point Load.

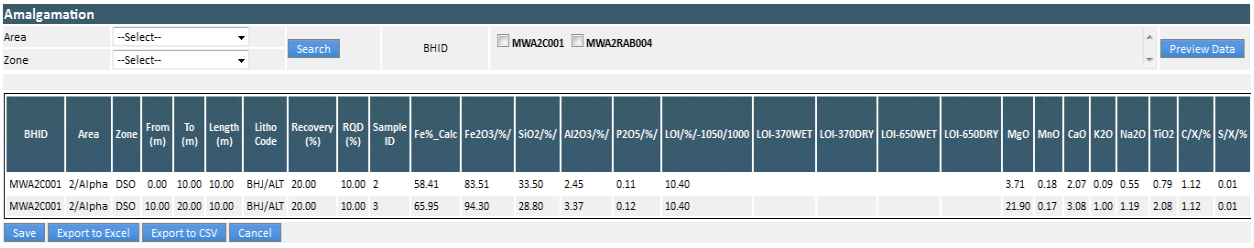


13. Amalgamation

On click on Amalgamation in Menu, User can see saved BHID's with edit option.

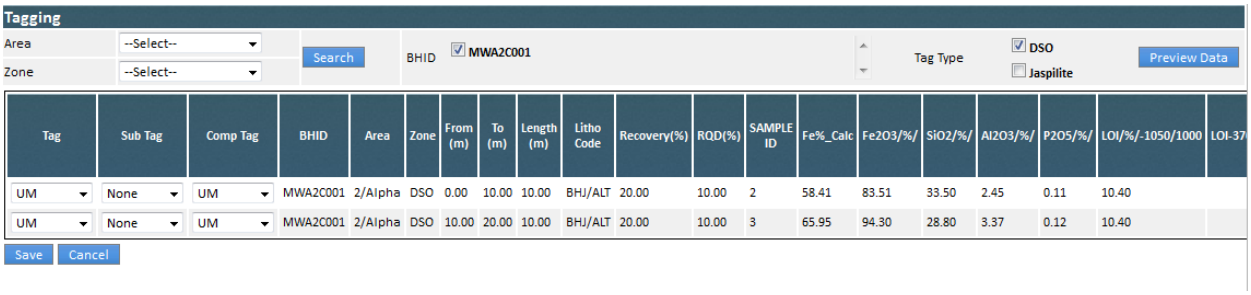
On click on Amalgamation in Menu, User can see already saved BHID's with edit option.

To add new details for a particular BHID click on Add new Button. Amalgamation is the merger of Assay, Geology, Magnetic Susceptibility, Geo-tech and Core Photograph. Geo-tech and Core Photograph are optional. To merge data select a BHID and click on search then save data. Amalgamation data will be saved and data can be used in Tagging Process.



14. Tagging

On click on Tagging in Menu, User can see saved BHID's with edit option. Only amalgamated BHIDs can be used in Tagging. After click on Add New button, search a BHID on the bases of area and zone or select a BHID from checklist and select Tag Type (DSO/Jaspilite) which is mandatory then click on search. Select Tag, Sub Tag, Comp Tag and submit the data.

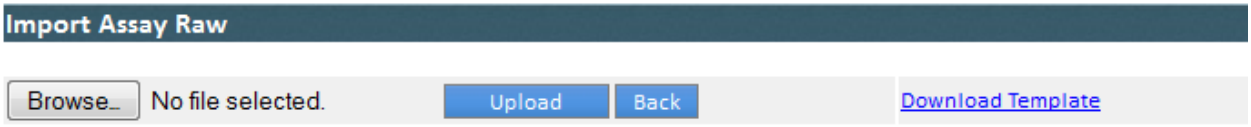


Import

Import section is same as data entry section with only difference, in Data Entry user can directly input data through web forms and in Import user has to put data in excel template to import. Please follow the validation rules to import the data for all sections. User can download the template from Download Template link and upload data by clicking on Upload Button.

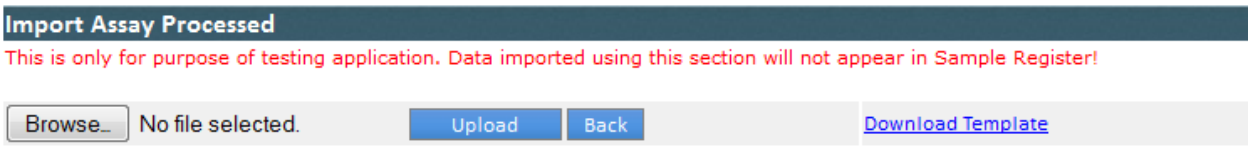
1. Assay Raw Import

In Assay Raw user can import lab report directly by using csv template. Sample Ids in import file has to be matched with sample register existing sample ids.



2. Assay Processed Import

In this section user can import old existing data.



QAQC

The overall conclusion of this application is QAQC Report. This report is used to

1) To document the procedures and methods of sample collection, preparation and analysis.
2) To provide assurance as to reliability of analyses using replicate samples, cross-laboratory checks.
3) To provide assurance as to the precision and accuracy from duplicate samples.
4) To provide assurance as to the accuracy from using recognized reference standards.
5) To provide a chain of custody of samples.

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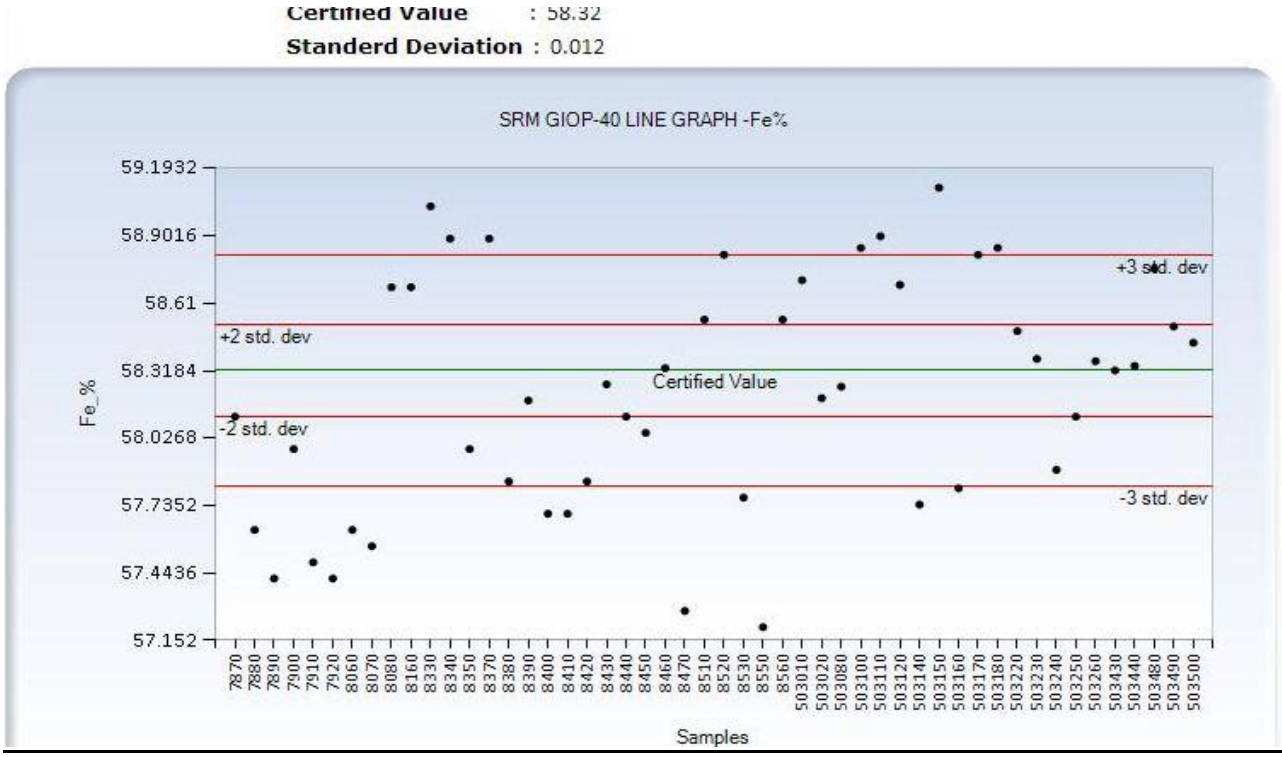

Other Security Features

- Secure password protection with access control.
- User will be locked if he enters wrong password three times.
- New password should not be same as last three passwords.
- 2 Users cannot work on one transaction form simultaneously, which enhance data accuracy.
- 2 users cannot work on same BHID and Sample Id simultaneously, which enhance data accuracy.
- A user cannot access system on two different machines at the same time.
- On delete/Edit of any record a mail will go to super admin with details of record.
- 100% traceability of all user activity.
- On deletion of any record on any transaction forms, will send data into a recycle bin, which can be restored later is required.