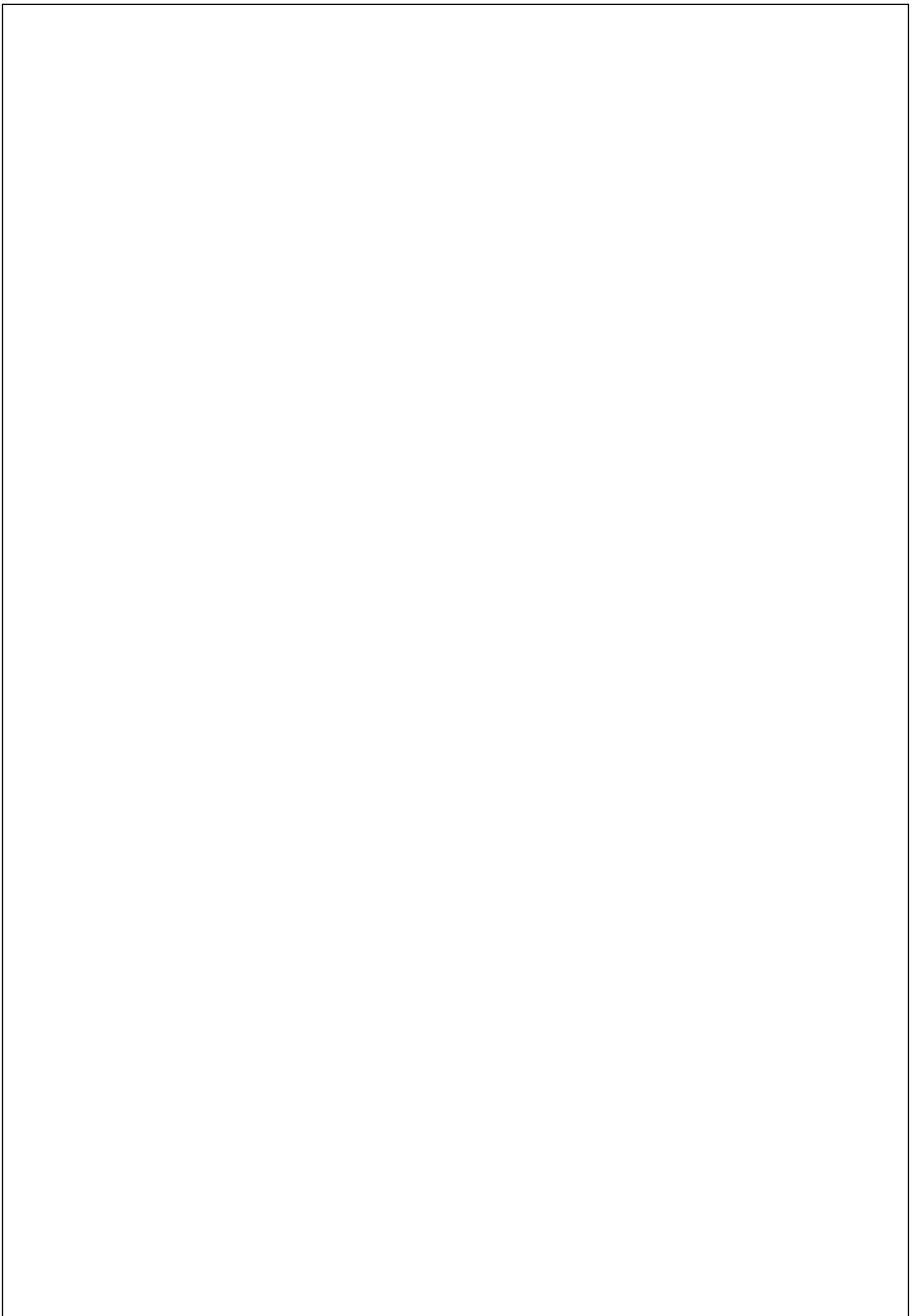




Blast Information Management System

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Introduction

Blast Information Management System is a software program for keeping records of the blasting operations, retrieving the recorded information and analyzing the information. It allows record of Blast Design Pattern, Location, Explosive, Initiators Used, Video, Fragmentation Analysis, Vibration Analysis, Accidents, Manpower and Associated Costs etc.

Executive Summary

BIMS is an integrated software package that brings convenient, automated management of maintenance activities to the computer desktop. The applications windows format and relational database simplify the process of maintenance management and provide improved control. You do not need programming expertise to become an expert applications user.

BIMS bring you the advantages of the Company's many years of Mining and Quarrying industry experience in a variety of maintenance environments, including companies where ISO 9000 standards must be met. Your company can benefit significantly by implementing BIMS to manage everything from blast hole details to Cost optimization of Blasts.

BIMS is designed to meet the Record keeping and analysis a needs of discrete mining industries such as Cement Plants, Infrastructure Development, and Coal/other minerals mines.

BIMS is designed for any level of user. Even with the applications' high level of sophistication they are easy to learn to use for such routine tasks as data entry and maintenance reporting. You can even customize your screens so users see only the information that is important to them.

BIMS as a web application

BIMS running on Web provides great power and flexibility. BIMS is software for storing, managing, retrieving and most importantly analysing drill and blast related information. Blasting operations routinely present the problem of vibrations, flyrock and correct blast design. Readily available past data in a logical format and blasting data analysis tools are the key features of BIMS. It is easy to access, and has 24 * 7 availability.

BIMS Dashboard

BIMS Dashboard consists of three fields:

- **New:** New Blast Record
- **Manage Blast:** Edit Blast Record
- **Reports:** print Blast Record
- **Blast Map:** show blast location on map

BIMS Menu

The BIMS Menu provides access to each module. This chapter gives a brief overview of each module. Later chapters of this manual describe the most commonly used modules in detail.

BIMS main screen in which records will be made and edited. Main Screen consists of several components in which various parameters can be recorded and edited. The main screen consists of several components which help during making of all the records. All these components are explained as below.

When user lands on BIMS Dashboard, he will be able to see following fields on BIMS menu:

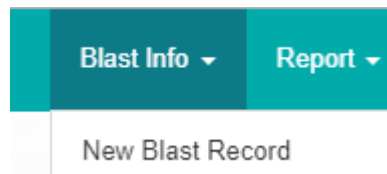
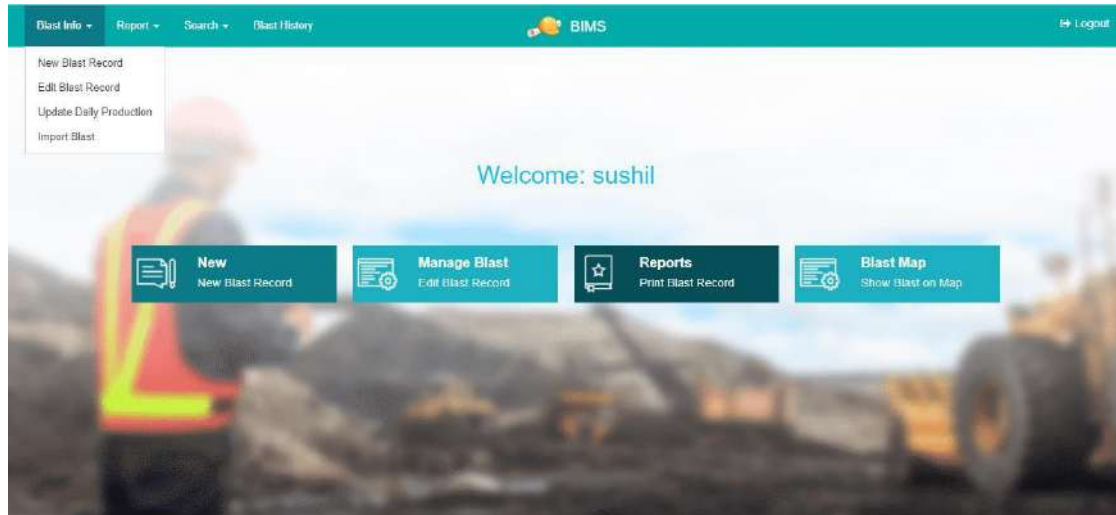


- **Blast Info:** By using this module he will be able to Add and Edit Blast Records.
- **Report:** By using this module user will be able to see and generate various Reports, which we will see in detail further.
- **Search:** By using this Module user will be able to search various parameters which we will see further wards.
- **Blast History:** By using this module user will be able to search history of records on map.
- **Logout:** User can logout by simply clicking on this button

BLAST INFORMATION

New Blast Record

Step 1 – Click on 'Blast Info' tab in the menu bar. Select 'New Blast Record' from the drop-down menu. You will be redirected to the 'Blast ID' form for the filling of new record.



Step 1 – Fill all the fields as follows:

A screenshot of the 'Blast Detail' form within the BIMS application. The form is titled 'Blast Detail' and features the MineExcellence logo at the top. It contains several input fields: 'Mine Name', 'Bench Name', 'Rock Type', and 'Time' (with a value of 22:34:38); 'Pit Name', 'Operation' (set to 'Production Blasting'), 'Density' (with a unit of 'Ton/m³'), and 'Blaster'; 'Zone Name', 'Material Blasted' (set to 'High Grade'), 'Date' (set to '12/03/2018'), 'Blast Name', and 'Blast Number'. At the bottom of the form, there are four buttons: 'Default', 'Save', 'Close', and 'Next'.

Figure 1 - Blast Details

- **Mine Name:** Select the particular mine name.
- **Pit Name:** Select the particular pit name for the selected mine.
- **Zone Name:** Select the zone for that particular pit.
- **Bench Name:** Select the bench for that particular zone.
- **Operation:** Select the type of blasting operation.
- **Material Blasted:** Select the quality of material for blasting.
- **Rock Type:** Select the type of rock.
- **Density:** It will be updated automatically according to the value of 'Rock Type'.
- **Date:** Fill the blast date.
- **Time:** Fill the blast time.
- **Blast Name:** Fill the name of the Blast name
- **Blaster:** Fill the name of the blasting person.
- **Blast Number:** It will generate automatically.

Step 2 – Click on 'Save' button to save all the blast information. A success message will be generated in a popup.

Step 3 - In order to switch to the 'Blast Design Pattern' form, click 'Next' button. In order to switch to the previous form, click 'Back' button.

Blast Design Pattern

This part gives actual records of the blast details such as hole diameter, bench height, face length, hole inclination, sub grade drilling, stemming material to be filled in by writing in the appropriate boxes. Pattern is to be chosen from the drop-down menu Average burden, Average spacing, Average Hole depth all the details could be filled into their respective boxes provided. Also, the drill plan and blast plan files can be approached and shown on the appropriate places. The water depth in indicated may be shown. Location the Blasting Face: This grid contains the Northing, Easting and R.L. of the four-edge point of the blasting area. Although these details are not mandatory, but they could be useful for future analysis. When we click on new blast details menu system will show a new form with default date & ID values.

Step 1 - In order to generate a blast design pattern, fill the provided fields. On clicking 'Default' button, some general values filled in the fields.

Design Parameters
Blast Location

Blast Design Pattern

Hole Diameter mm

Bench Height m

Hole Inclination (Vertical) degree

Average Spacing m

Average Water Depth m

Average Hole Depth m

Stemming Material

Pattern

Tubing Diameter mm

Face Length m

Average Burden m

Subgrade Drilling m

Total Holes:

Average Stemming Length m

Decking Material

▲ Row and Hole Detail

Blast Face Location

S. No.	Northing / lat	Easting / long	RL Top	RL Bottom	
1					Remove
2					Remove
3					Remove
4					
				Add New Row	

Drill Blast Location No file selected.
Supported Format: jpg,jpeg,bmp,png. Size Limit: 10 mb

Figure 2 - Blast Design Pattern

- **Hole Diameter:** Fill the value of the diameter of the hole (in millimeters).
- **Bench Height:** Fill the height of the bench involved in the blast (in meters).
- **Face Length:** Fill the length of the zone/face involved (in meters).
- **Tubing diameter:** fill the diameter of the tubes of the explosives to be used (in millimeters).
- **Hole Inclination:** Indicate the inclination of hole (in degrees).
- **Average Burden:** Fill the value of average burden in different rows (in meters).
- **Average Spacing:** Calculate the different spacing between the holes and fill the average value of all.
- **Subgrade Drilling:** Fill the average drilled height of holes.
- **Average Hole Depth:** Calculate the depth of each hole and fill the average value (in meters).
- **Average Stemming Length:** Fill the average length of the concrete material used for stemming (in meters).
- **Stemming Material:** Select the type of stemming material.
- **Average Water Depths:** Calculate the depth of water level in each hole and fill the average value.
- **Decking Material:** Select the particular material for decking in the holes.
- **Drill Blast Location:** Upload the image of the blast location.
- **Pattern:** The drop-down menu shows pattern rectangular, square and staggered.
- **Location of the Blasting Face/Area:** it includes following information:
 - **Blasting Point(s):** Coordinates of the blast location are given in this text box with the following information of the four point of the blast location.
 - **Northing:** Fill the Longitude value of the specific blast coordinate.
 - **Easting:** Fill the Latitude of the specific blast coordinate.
 - **R.L. (Reduce Level):** The height from the Sea level is filled in this field.
 - **Total Holes:** It will be calculated automatically.

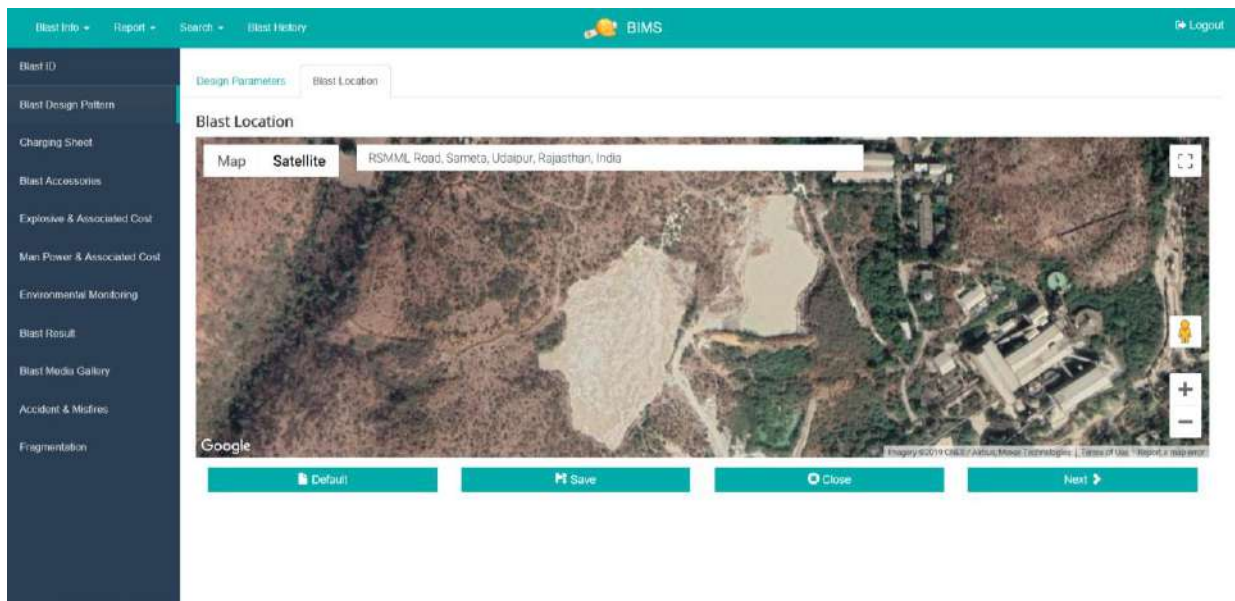


Figure 3 - Blast Location

NOTE:** Blast location: This location will show according to entered location in central mine

Step 2 - Click on 'Row and Hole Detail' button. A popup will be generated with the fields to be filled.

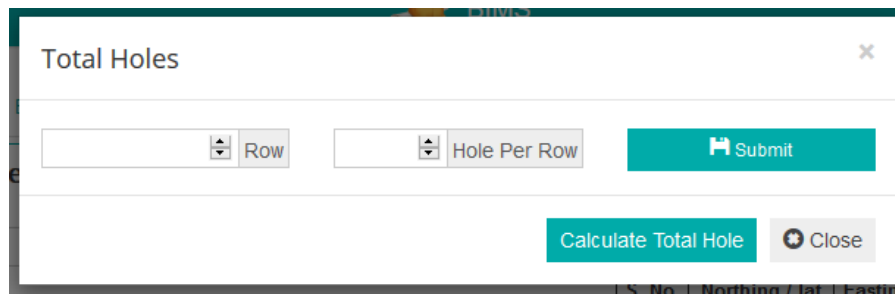


Figure 4 - Pattern Details

- **Rows:** Number of rows in the blast may be indicated.
- **Holes Per Row:** Number of holes per row may be specified and 'Total Holes'.

In order to do editing in any of the values, click 'Edit' link in each row of the table respective of the 'Total Holes' value.

User can edit each row information by click on edit button.

- Click on edit button
- Update the hole information
- Click on update

1 Update / Cancel

Step 4 – Click ‘Calculate Total Hole’ to generate ‘Total Holes’ value. After that, click ‘Close’ button to close the popup.

Calculate Total Hole

Step 5 – Click ‘Save’ button to save the blast record. A success message will be generated.

Charging Sheet

Step 1 – Click on ‘Charging Sheet’ tab in the side menu to switch to Charge Sheet form.

Figure 5 - Charging Sheet

Charging Sheet

By Length By Weight Individual

- **By Length:** Select this option if you want to fill the results according to the filled length of the explosive in the hole.
- **By Weight:** Select this option if you want to fill the results according to the weight of the explosive filled in the hole.
- **Individual:** Select this option for the results according to the individual hole.

Step 3 – Fill the details as follows:

- **Hole Depth:** It will be updated automatically according to the previous 'Hole Depth' value.
- **Burden:** It will be updated automatically according to the previous 'Average Burden' value.
- **Spacing:** It will be updated automatically according to the previous 'Average Spacing' value.
- **Water Depth:** It will be updated automatically according to the previous 'Average Water Depth' value.
- **Stemming Length:** It will be updated automatically according to the previous 'Stemming Length' value.
- **Start At:** Fill the starting time value.
- **Base Charge:** Select the base charge name.
- **Base Length:** Fill the value which denotes the length of the base in metres.
- **Base Weight:** Fill the weight of the used charge in kilograms.
- **Base Cost/Unit:** It will be updated according to the value of 'Base Charge'.
- **Top Deck:** Fill the amount of decking material which is poured over the hole. The value is some percent part of the hole.
- **Bottom Deck:** Fill the amount of decking material which is poured at the bottom of the hole. The value is some percent part of the hole.
- **Column Charge:** Select the column charge name.
- **Booster Charge:** Select the Booster Charge name.
- **Column Length:** Fill the value which denotes the length of the column in metres.
- **Column Weight:** Fill the weight of the used charge in kilograms.
- **Column Cost/Unit:** It will be updated according to the value of 'Column Charge'.
- **Deck Separator Length:** Fill the value of the distance between 'Base Charge' and 'Column Charge' in meters.
- **Booster Cost/Unit:** It will be updated according to the value of 'Booster Charge'.
- **Booster Weight:** Fill the weight of the used charge in kilograms.
- **Column Length:** Fill the value which denotes the length of the column in metres.
- **Hole Delay:** Fill the delay value between the holes in terms of milliseconds.
- **Row Delay:** Fill the delay value between the rows in terms of milliseconds.

Step 4 – Click 'OK' button. On its click, the values will be shown in the table.

Step 5 – Click ‘Save’ button to save the filled data.

Step 6 – Click ‘Blast Plan’ button. A popup will open showing the blast plan.

Step 7: A blast plan will appear on the screen .

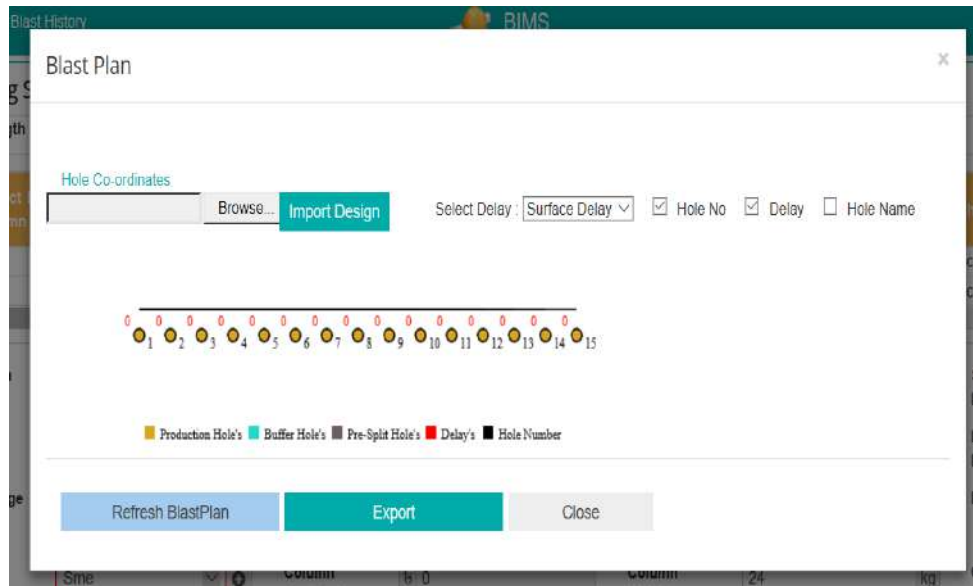
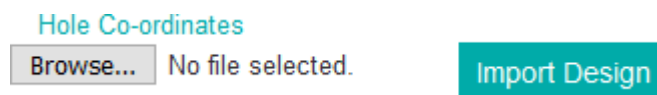


Figure 6 - Blast Plan

Browse/import : You can import a file by clicking on browse and then selecting the respective file to be imported.



Step 8 – Click ‘Export Design’ button to export the blast plan data into a .csv file. Click ‘Save Changes’ to save any edited data.



In order to close the popup, click ‘Close’ button.

Step 9 – Click ‘Close’ button to the Blast Plan popup.

Step 10 – Click ‘Next’ button to switch to the ‘Blast Accessories’ form. In order to switch to the previous form, click ‘Back’ button.

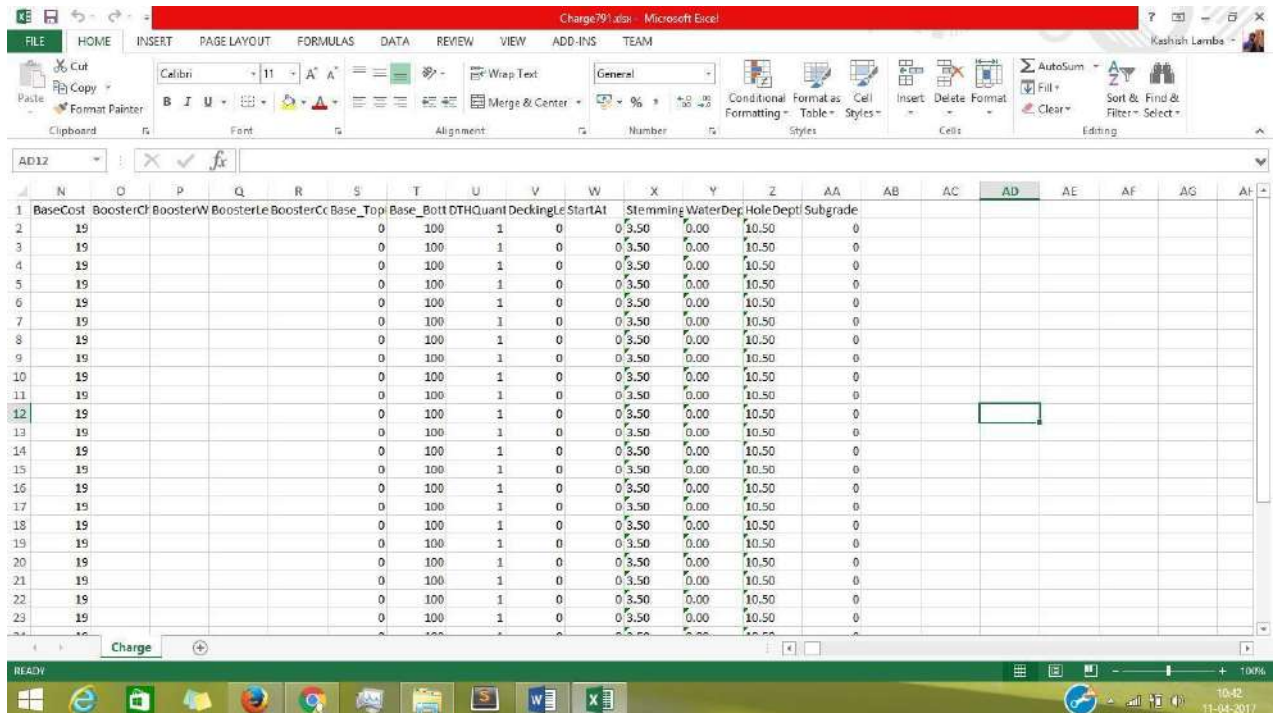
Note:** Filling of Charging Sheet in a different manner(optional):

Step 1 – Click ‘Download Blank Charging Sheet’ button. An .xlsx file will be downloaded into your

[Download Blank Charging Sheet](#)

local system.

Step 2 – Fill the blank excel sheet with all the data values for charging.



The screenshot shows a Microsoft Excel spreadsheet titled 'Charge791.xlsx'. The spreadsheet has columns labeled N through At and rows 1 through 29. The data in the spreadsheet is as follows:

	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	At
1	BaseCost	BoosterC	BoosterW	BoosterL	BoosterC	Base_Top	Base_Bott	DTHQuant	DeckingLe	StartAI	Stemming	WaterDep	HoleDepth	Subgrade							
2	19					0	100	1	0	0	3.50	0.00	10.50	0							
3	19					0	100	1	0	0	3.50	0.00	10.50	0							
4	19					0	100	1	0	0	3.50	0.00	10.50	0							
5	19					0	100	1	0	0	3.50	0.00	10.50	0							
6	19					0	100	1	0	0	3.50	0.00	10.50	0							
7	19					0	100	1	0	0	3.50	0.00	10.50	0							
8	19					0	100	1	0	0	3.50	0.00	10.50	0							
9	19					0	100	1	0	0	3.50	0.00	10.50	0							
10	19					0	100	1	0	0	3.50	0.00	10.50	0							
11	19					0	100	1	0	0	3.50	0.00	10.50	0							
12	19					0	100	1	0	0	3.50	0.00	10.50	0							
13	19					0	100	1	0	0	3.50	0.00	10.50	0							
14	19					0	100	1	0	0	3.50	0.00	10.50	0							
15	19					0	100	1	0	0	3.50	0.00	10.50	0							
16	19					0	100	1	0	0	3.50	0.00	10.50	0							
17	19					0	100	1	0	0	3.50	0.00	10.50	0							
18	19					0	100	1	0	0	3.50	0.00	10.50	0							
19	19					0	100	1	0	0	3.50	0.00	10.50	0							
20	19					0	100	1	0	0	3.50	0.00	10.50	0							
21	19					0	100	1	0	0	3.50	0.00	10.50	0							
22	19					0	100	1	0	0	3.50	0.00	10.50	0							
23	19					0	100	1	0	0	3.50	0.00	10.50	0							
24	19					0	100	1	0	0	3.50	0.00	10.50	0							

Figure 7 - Charging Sheet Excel

Step 3 – Save the file to the local system.

Step 4 – Click ‘Browse’ button to select the excel file. Click ‘Import’ to import the charging data excel

file.

Step 5 - Click ‘Save’ button to save the filled data.

Step 6 - Click ‘Next’ button to switch to the ‘Blast Accessories’ form. In order to switch to the previous form, click ‘Back’ button.

Reset Grid – This button is use to reset the charging sheet.

Reset Grid

Expand - This button is use to view the charging sheet on whole page.

Blast Accessories

Step 1 – Click on the 'Blast Accessories' tab in the side menu.

The screenshot shows the 'Blast Accessories Delay' form in the BIMS software. The form is divided into several sections:

- Initiator (Elect. Det.):** A dropdown menu with '--Select--' and a gear icon.
- Cost/Unit:** A text input field with 'tj' entered.
- No. of Elect. Det.:** A text input field.
- [Hole Delay]**
 - Down the Hole:** A table with columns S. No., Name, Cost, and Qty. Row 1: S. No. 1, Name --Select--.
- [Surface Delay]**
 - (Hole-Hole) Used:** A table with columns S. No., Name, Cost, and Qty. Row 1: S. No. 1, Name --Select--.
 - (Row-Row) Used:** A table with columns S. No., Name, Cost, and Qty. Row 1: S. No. 1, Name --Select--.

At the bottom of the form, there are four buttons: Back, Save, Close, and Next.

Figure 8 - Blast Accessories

Step 2 – Fill the 'Electronic Detonator' details as follows:

- **Initiator (Elect. Det.):** Select the type of detonator.
- **Cost/Unit:** It will be updated according to the value of 'Initiator'.
- **No. of Elect. Det.:** Fill the total no. of detonators used.

Step 3 - Fill the 'Hole Delay' details as follows:

- **Down the Hole Used:** Select the name from the 'Name' list field. The 'Cost' field will be updated automatically after the selection of 'Name'. Fill the quantity in 'Qty' field.

Step 4 - Fill the 'Surface Delay' details as follows:

- Fill the details for '**(Hole-Hole) Used**' table. Select a value of connecting delay material from 'Name' list. The 'Cost' will be updated according to the 'Name' field. Fill the quantity of connecting material in 'Qty' field.
- Fill the details for '**(Row-Row) Used**' table. Select a value of connecting delay material from 'Name' list. The 'Cost' will be updated according to the 'Name' field. Fill the quantity of

connecting material in 'Qty' field.

Note: In order to add a new row, click 'Add New Row' button in the particular table.

Step 5 - Click 'Save' button to save the filled data.

Step 6 - Click 'Next' button to switch to the 'Explosive and Associated Cost' form. In order to switch to the previous form, click 'Back' button.

Explosive and Associated Cost

Based on the actual blast parameters, the menu automatically gives the quantity and cost of each component of the explosive consumed and also gives the total cost of explosives and initiators used. Gives values or un- editable as they only reflect the values selected in the previous window i.e. 'Charging Sheet'.

Explosive Consumed: This grid shows the costs of all the explosives used and as shown in the charging sheet.

Initiator (DTH) Consumed: This grid shows the costs of all the Initiator (DTH) used and as shown in the charging sheet.

Initiator (ED) Consumed: This grid shows the costs of all the Initiator (ED) used and as shown in the charging sheet.

TLD Device Consumed: This grid shows the costs of all the TLD Device used and as shown in the charging sheet.

TLD Consumed: This grid shows the costs of all the TLD used and as shown in the charging sheet.

Explosive & Associated Cost

[Explosive Consumed]

Name	Unit Used	Unit Cost	Total Cost
Emool Boost	0.00	190.00	0.00
A.N.F.O.	603.46	26.50	15991.43

[Surface Initiator Row to Row]

Name	Total No	Per Unit Cost	Total Cost
TLD 8M	5	120.00	600.00

[Initiator (DTH) Consumed]

DTH_Name	Total No	Per Unit Cost	Total Cost
Fameltronic Detonator	5	9.56	47.80

[Surface Initiator Hole to Hole]

Name	Total No	Per Unit Cost	Total Cost
TLD 7M	4	105	420

[Initiator (ED or MSDD) Consumed]

Name	Total No	Per Unit Cost	Total Cost
Fameltronic Detonator	3	9.56	28.68

[Total Explosive Cost Summary]

Total Explosive Cost (₹) :	16,991.43	Total Explosive Initiator Cost (₹) :	17,087
Total Initiator (DTH) Cost (₹) :	47.80	Total Stemming Cost (₹) :	0.00
Total Initiator (ED or MSDD) :	28.68	Total Docking Cost (₹) :	0.00

Navigation: Back, Save, Close, Next

Figure 9 - Explosive & Associated Cost

Step 1 – Click on the ‘**Explosive & Associated Cost**’ tab in the side menu.

Step 2 – Click ‘**Save**’ to save all the information. A success message will be generated in a popup.

Manpower and associated cost

Associated cost of drilling, insurance, vehicle hiring, blast vibration monitoring and local government permit charges etc. All these can be edited, deleted and additional information can be provided.

Step 1 – Click ‘**Manpower & Associated Cost**’ tab in the side menu.

Figure 10 - Manpower & Associated Cost

Step 2 – In order to add Manpower & associated cost details, click ‘**Add**’ button.

Step 3 – Fill the fields as per following:

- **Cost Item:** It is possible to add additional designation in the manpower to indicate the additional cost. Also, it is possible to add any additional cost i.e. vehicle hiring, insurance etc.
- **Cost per Hour:** Automatically updated according to the value of ‘Cost Item’.
- **Working Hour:** Can be entered working hours of manpower or other associated items.
- **Total Nos.:** Entered here total quantity of item.

Step 4 – In order to generate the value of ‘Total Cost of Item’, click the ‘**OK**’ button which is highlighted in Red color.

Step 5 – Fill the value for ‘Drill Cost per meter’ field.

- **Drill Cost per meter:** Fill the cost per meter value.

Step 6 – Click ‘OK’ button which is highlighted in Blue color.

- **Total Manpower and Associated Blasting Cost:** Calculated automatically.
- **Total Meterage Drill:** Calculated automatically.
- **Total Drill Cost:** Calculated automatically.
- **Total Cost:** Calculated automatically.

Step 7 – Click ‘Save’ button to save all the information. A success message is generated in a popup.

Step 8 – Click ‘Next’ button to switch to the ‘Environmental Monitoring’ form. In order to switch to the previous form, click ‘Back’ button.

Editing Details

Step 1 – Click on ‘Edit’ button. Select the specific row from the table in which you want the changes to be done. Make the changes in the fields, if required.

Step 2 – Click ‘OK’ button to save the changes.

Delete Process

Step 1 – Select the specific row from the table to be delete.

Step 2 – Click ‘Delete’ button. A confirmation popup will be generated. Click ‘OK’ to delete.

Environmental monitoring

This form gives details of the weather related and station related in format.

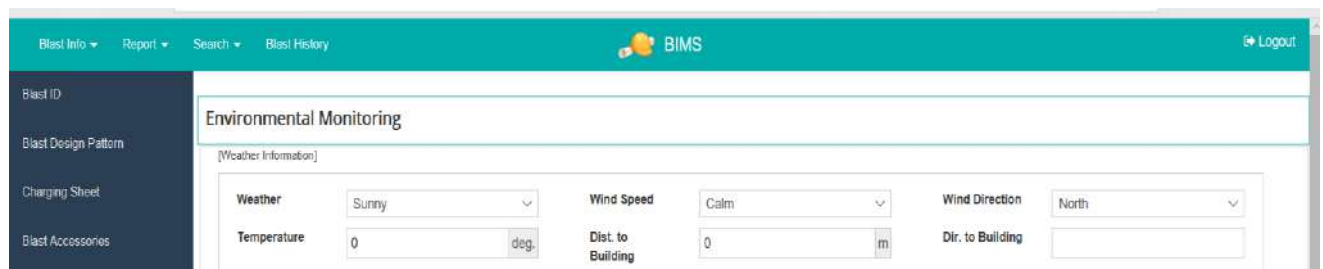


Figure 11 - Environmental Monitoring

Step 1 – Fill the ‘Weather Information’.

- **Weather:** Select the type of weather at the time of blast.
- **Wind Speed:** Select the type of wind speed at the location.
- **Wind Direction:** Select the direction of wind.
- **Temperature:** Fill the value of temperature in terms of degrees.

Dist. to Building: Fill the value of distance from the building in terms of metres.

Dir. To Building: Specify the direction of the blast in context of the building.

Step 2 – In order to add a vibration information:

Click 'Add' button and Fill the following fields:

- **Station:** Fill the name of the place where the vibration affects.
- **Northing:** Fill the value of the Latitude.
- **Easting:** Fill the value of the Longitude.
- **Reduce Level:** fill the R.L. value for the blast in terms of meters.
- **Distance:** Fill the value of distance up to which the vibration affects.
- **Air Blast:** Fill the value of blast intensity in terms of decibels.
- **Vibration File:** Upload an image file of the vibration.
- **Instrument:** Select the specific instrument which you have used for the vibration detection.
- **Coupling:** Select the coupling material.
- **Longitudinal:** Fill the value in millimeter per second.
- **Traverse:** Fill the value in millimeter per second.
- **Vertical:** Fill the value in millimeter per second.
- **ZC Frequency:** Fill the frequency of vibrations detected in terms of hertz.
- **Peck Vector Sum:** Fill the value in meter per second.
- **Max PPV:** Fill the value in meter per second.
- **Max Inst. Charge:** Fill the value of the maximum value of charge in terms kilograms.
- **PSPL:** Fill the value of pressure in terms of Pascal.
- **Operator:** Fill the name of Operator of that blast.
- **Analyst:** Fill the name of the analysis person for that blast

The screenshot displays the 'Environmental Monitoring' section of the BIMS software. The interface includes a top navigation bar with 'Blast Info', 'Report', 'Search', 'Blast History', and 'Logout' options. A left sidebar lists various menu items, with 'Environmental Monitoring' currently selected. The main content area is titled 'Environmental Monitoring' and contains a sub-section for '(Weather Information)'. This section includes dropdown menus for 'Weather' (set to 'Sunny'), 'Wind Speed' (set to 'Calm'), and 'Wind Direction' (set to 'North'). Below these are input fields for 'Temperature' (0 Deg), 'Dist. to Building' (0 m), and 'Dir. to Building'. A central panel features three buttons: 'Add' (green), 'Edit' (orange), and 'Delete' (red). The bottom section of the form is a grid of input fields for vibration data: 'Station', 'Instrument' (dropdown), 'Peak Vector Sum' (mm/s), 'Northing', 'Coupling' (dropdown), 'Max PPV' (mm/s), 'Easting', 'Longitudinal/Radial' (mm/s), 'Max Inst. Charge' (kg), 'Reduced Level' (m), 'Traverse' (mm/s), 'PSPL' (Pascal), 'Distance' (m), 'Vertical' (mm/s), 'Operator', 'Air Blast' (db), and 'ZC Frequency' (Hz). The 'Analyst' field is also present at the bottom right.

Figure 12 - Vibration Input

Step 3 – Click 'OK' button to insert all the information. A table will be generated showing the values inserted.

Step 4 – Click ‘Save’ button to save all the information. A success message will be generated in a popup.

Step 5 – Click ‘Next’ button to switch to the ‘Blast Result’ form.

Blast result

Step 1 – Click on the ‘Blast Result’ tab in the side menu.

Step 2 – Fill the following details:

- **Actual Production (Tonnage):** Fill the value of tonnage recovered from face in terms of ton.

Note: All the other fields will be updated automatically according to the calculations.

Step 3 – Click ‘OK’ button. On its click, the ‘Actual Powder Factor’ value will be updated according to

Figure 13 - Blast Result

the calculations

Step 4 – Fill the ‘Performance’ section details as follows:

- **Fly rock:** Fill the distance of the fly rock in terms of meters.
- **Displacement:** Displacement of the fly rock.
- **Muck Profile:** Select the specific muck profile from the list.
- **Comment:** Fill any other details about the blast.
- **Heavy/Swell:** Select the type of heavy/Swell value.
- **Stemming Ejection:** Select if it is yes or no.
- **Overbreak:** Fill the value of largest
- **Boulder Count:** Total no. of big rocks.
- **Photo:** Upload an image of the blast.
- **Video:** Upload a video showing the blast.

Step 5 – Click ‘Save’ button to save all the information. A success message will be generated in a popup.

Step 6 – Click ‘Next’ to switch to the ‘Accident & Misfires’ form. In order to switch to the previous form, click ‘Back’ button.

Accident and misfires

Step 1 – Click on ‘Accident & Misfires’ tab in the side menu.

Step 2 – Fill all the fields as required.

- **Accident Type:** Select the type of accident.
- **Details:** Fill the details of any mis happenings.
- **Photo:** Upload an image showing the accident. The image will be displayed in the upper left image box.
- **Misfire Hole:** Fill the value for the count of misfired holes.
- **Details:** Fill the details for misfired holes.
- **Photo:** Upload an image of the misfired holes. The image will be displayed in the upper right image box.

The screenshot displays the 'Accident & Misfires' form within the BIMS application. The interface features a teal header with navigation options and a dark sidebar on the left. The main content area is split into two columns. The left column contains a dropdown for 'Accident Type' (set to 'Nil'), a text field for 'Details', and a 'Photo' upload section with a 'Browse...' button and a note on supported formats and size limits. The right column contains a text input for 'Misfire Hole' (set to '0'), another 'Details' text field, and a 'Photo' upload section with a 'Browse...' button and a note on supported formats and size limits. At the bottom of the form, there are four buttons: 'Back', 'Save', 'Close', and 'Next'.

Figure 14 - Accident & Misfire

Step 3 – Click ‘Save’ button to save all the information. A success message will be generated in a popup.

Step 4 – Click ‘Next’ button to switch to the ‘Fragmentation’ form. In order to switch to the previous

form, click 'Back' button.

Fragmentation

Step 1 – Click on 'Fragmentation' tab in the side menu.

The screenshot shows the BIMS web application interface. The top navigation bar includes 'Blast Info', 'Report', 'Search', 'Blast History', the BIMS logo, and a 'Logout' button. The sidebar menu on the left lists various options, with 'Fragmentation' highlighted. The main content area is titled 'Fragmentation' and contains a form with the following fields and controls:

- Fragmentation:** A dropdown menu set to 'Very Good'.
- Fragmentation Photo:** A text input field with a 'Browse...' button. Below it, the text reads: 'Supported Format: jpg,jpeg,bmp,png. Size Limit: 10 mb'.
- Fragmentation Analysis:** A text input field with a 'Browse...' button. Below it, the text reads: 'Supported Format: jpg,jpeg,bmp,png,xlsx. Size Limit: 10 mb'.
- Fragmentation OverSize:** A text input field with '0' and a '%' symbol.
- Fragmentation in Range:** A text input field with '0' and a '%' symbol.
- Fragmentation UnderSize:** A text input field with '0' and a '%' symbol.
- Excavator Position:** A table with 5 rows and 2 columns. The first column is 'Excavator Position' (1-5) and the second is 'Digging' (all set to 'Very Good').
- Sample Fragmentation Analysis Excel:** A link to download a sample Excel file.
- Buttons:** 'Back', 'Close', and 'Save' buttons at the bottom right.

Figure 15 - Fragmentation

Step 2 – Fill the following details:

- **Fragmentation:** Select the quality type of fragmentation.
- **Fragmentation Photo:** Upload an image of fragmentation. It will be updated in the upper left image box. The photo format can be **jpg, jpeg, bmp, png**.
- **Fragmentation Analysis Photo:** Upload an image of the analysis of the fragmentation. It will be updated in the upper right image box. This analysis format can be **jpg, jpeg, bmp, png, xlsx**.
- **Fragmentation oversize:** here you can give the percentage of oversize rock broken.
- **Fragmentation in range:** you can give the percentage of rock broken in range.
- **Fragmentation undersize:** give the percentage of fragmentation that is undersize.
- **Digging :** click on the drop down to select the type of digging in result at the respective excavators positions.
- **Sample Fragmentation Analysis Excel:** you can download a sample excel file that gives the fragmentation analysis.

Sample fragmentation analysis file:

The screenshot shows an Excel spreadsheet with a data table. The table has two columns: 'pp' and 'size'. The data is as follows:

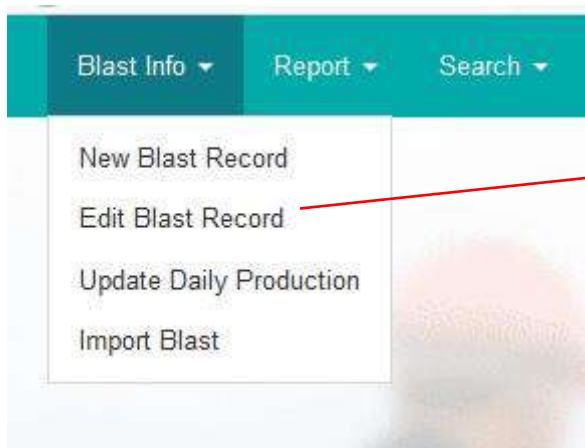
pp	size
90.05	900
97.68	450
95.75	400
93.01	350
88.08	300
82.95	250
74.33	200
68.05	175
63.5	150
52.5	125
40.05	100
26.81	75
11.56	50
1.45	25
0.26	10
0.08	5
0.02	2.5
0	1.25

Step 3- Click 'save' button to save all the information. A success message will be generated in a popup.

Step 4 – Click on 'Close' button. A confirmation message will be generated. After clicking 'OK', you will be redirected to the home page. In order to switch to the previous form, click 'Back' button.

EDIT Blast Record

Step 1 – Click on 'Edit Blast Record' form the drop-down menu from the 'Blast Info' menu tab.



Step 2 – Specify the date range for the date-wise results. Select the starting date in the 'From' field and ending date in the 'To' field. By default, the range will be set since last 30 days till the current date.

From	5/14/2015	mm/dd/yyyy	To	12/4/2018	mm/dd/yyyy	Show Result
------	-----------	------------	----	-----------	------------	-------------

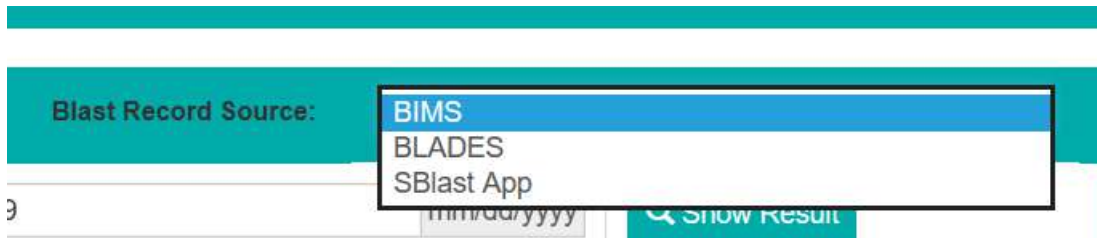
Step 3 – Click ‘**Show Result**’. It will generate the list of the blasts done in that date range.

Blast record source



A screenshot of a web interface showing a dropdown menu for 'Blast Record Source'. The menu is open, and 'BIMS' is selected. The background is a teal color.

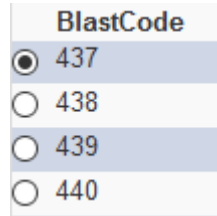
This is to select the the source of the blast record . By default BIMS is the blast record source .



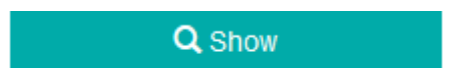
A screenshot of a web interface showing a dropdown menu for 'Blast Record Source'. The menu is open, and the options 'BIMS', 'BLADES', and 'SBlast App' are visible. The background is a teal color.

Here the drop down button shows the option of all BIMS/BLADES and SBlast App these options can be selected if we want to search a synced a file either from BLADES or SBlast App.

Step 4 – Select the radio button of the particular blast record. You will be redirected to the ‘Blast ID’ form of the selected blast record.



A screenshot of a web interface showing a radio button selection form for 'BlastCode'. The options are 437, 438, 439, and 440. The option 437 is selected.



A screenshot of a web interface showing a teal button with a magnifying glass icon and the text 'Show'.

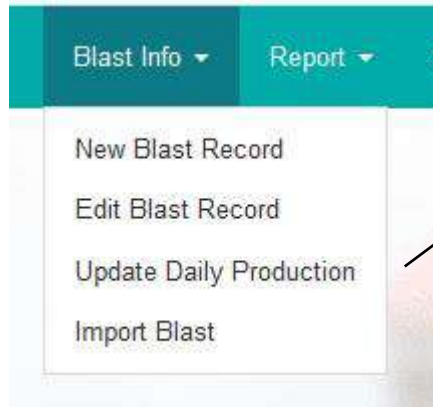
Deleting a record

Step 1 – Click on radio button. Click on ‘Delete’ button.

Step 2 – A confirmation message will be generated. In order to delete, click ‘OK’.

Update Daily Production

In this module is user for update the daily production. This updated daily production will show in report section.



Search the record by selecting the date range.

Click on update daily production

Update Daily Production

From	10/1/2018	To	12/5/2018	Show Result							
Update Daily Production	6821	EIR_20181002_630	Limestone Mine	Pit 2(Western)	Bench 1	1003	02/10/2018	11:56:30	0.00	0.00	0.00
Update Daily Production	6863	JK_1010201823341	Limestone Mine	Pit 3	Bench 2	1002	10/10/2018	02:03:34	39092.64	0.00	0.00
Update Daily Production	6909	AVR17102018131840609	AvR Australia Mine	South East Pit	Flat-Head	300/32	17/10/2018	13:18:00	6440.00	0.00	0.00
Update Daily Production	6911	AVR17102018131840609	AvR Australia Mine	South East Pit	Flat-Head	300/32	17/10/2018	13:18:00	6440.00	0.00	0.00
Update Daily Production	6910	BUL_1710201810473792	Limestone Mine	Pit 2(Western)	Bench 1	1003	17/10/2018	10:47:00	0.00	0.00	0.00
Update Daily Production	6915	TEL1018201812343	AvR Gold Mine WA	AvR - Main Pit	3-53XX TEST BENCH	Stage 3	18/10/2018	00:53:34	377434.70	0.00	0.00
Update Daily Production	6929	NUV_20181022_520	Limestone Mine	Pit 2(Western)	Bench 1	1003	22/10/2018	03:25:20	0.00	0.00	0.00
Update Daily Production	6931	NUV_20181022_051	Limestone Mine	Pit 2(Western)	Bench 1	1003	22/10/2018	04:20:51	0.00	0.00	0.00
Update Daily Production	6925	NUV_20181022_704	Limestone Mine	Pit 3	Bench 2	1002	22/10/2018	12:07:04	4130.00	0.00	4.00
Update Daily Production	6927	NUV_20181022_247	Limestone Mine	Pit 3	Bench 2	1002	22/10/2018	12:52:47	0.00	0.00	0.00

To enter daily production value user need to follow following steps: **Step 1:** Click On Add new

Add New Production Entry

Production entry.

Step 2: Enter the production in ton.

Production Ton

Date

Step 3: Enter the date.

Add

Close

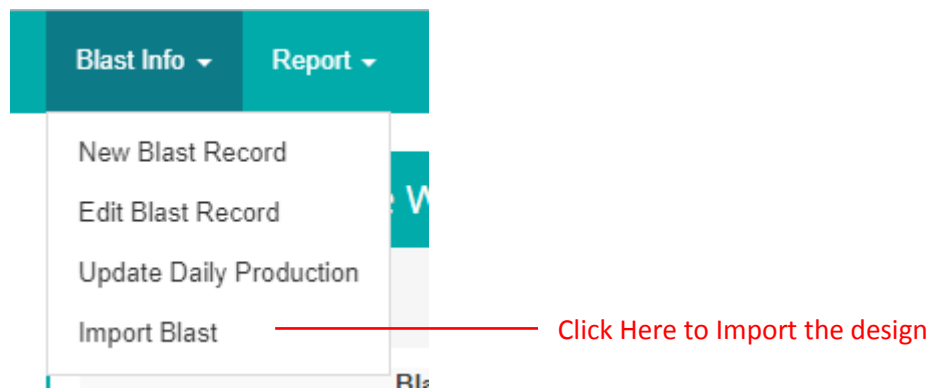
If user wants to change in the entry then it can be done by clicking on Close button.

Date	Production
12/5/2018	1000.00

Figure 16 - Update Daily Production

Import Blast

This module will use to import the design.



Follow the below steps to import the file

Step1: Click on Download sample file.

Step 2 – Select the file to import

Please select the Blast File

Choose File No file chosen

Import

Step 3: Enter the all basic info

Select Location of Blast

Mine Name --Select--

Pit Name --Select--

Zone Name --Select--

Bench Name --Select--

Rock Type --Select--

Date / Time 12-05-2018 14:28:11

Pattern Type Square

Import Close

Figure 17 - Basic Info

- **Mine Name:** Enter the mine name in which mine user wants to import the design
- **Pit Name:** Enter the pit name in which pit user wants to import the design
- **Zone Name:** Enter the Zone name in which zone user wants to import the design.
- **Bench Name:** Enter the Bench name in which bench user wants to import the design.
- **Rock Type:** Select the rock type form the list.
- **Date / Time:** Enter date and time.
- **Pattern Type:** Select the pattern type.

Click on "Import" .

Report Menu

Blast Detail and Result

Step 1 – Click on 'Report' tab in the menu bar. Select 'Blast Detail and Result' from the drop-down menu

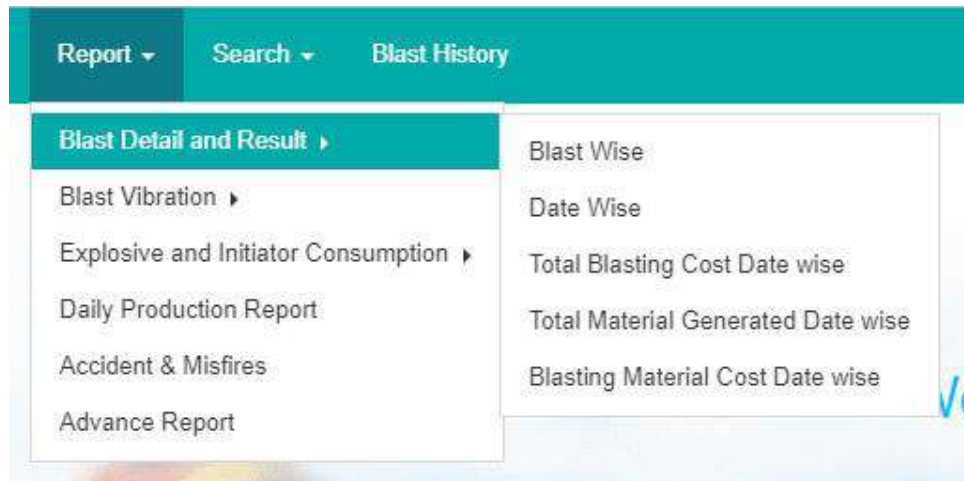



Figure 18 - Report Menu

Step 2– You can select the type in which you want to see the details and results.

Step 3– Select a specific date range. Select starting date in the 'From' field and ending date in 'To' field. Click on 'Show Result' button.

The image shows a form titled 'Blast Detail Report - Blast Wise'. It features two date input fields: 'From' and 'To'. The 'From' field contains the date '11/5/2018' and has a placeholder 'mm/dd/yyyy'. The 'To' field contains the date '12/5/2018' and also has a placeholder 'mm/dd/yyyy'. To the right of these fields is a teal button with a magnifying glass icon and the text 'Show Result'.

Step 4 – Click on radio button

Step 5 – Click on show button

Step 6 – Select the particular blast record for which you have to generate the report.

Blast NO	Blast Date	Mine Name	Pit Name	Zone Name	Bench Name	Column Weight	Base Weight	Total Weight	Powder Factor
<input checked="" type="radio"/> MIN282017101438	02/08/2017	ABC	Pit 2(Western)	1003	Bench 1	498.4	502.4	1000.8	4.00
<input type="radio"/> MIN28201731123	02/08/2017	ABC	Pit 2(Western)	1003	Bench 1	265.76	383.68	649.44	3.23
<input type="radio"/> ABC322017114055	03/01/2017	ABC	Pit 2(Western)	1003	Bench 1	16	1.6	17.6	159.56
<input type="radio"/> ABC32201794446	03/01/2017	ABC	Pit 2(Western)	1003	Bench 1	11.78	5.27	17.05	3436.36

Step 7 – Click ‘Show’ button. On its click, the report for that particular blast data will be downloaded to the local system

Blast No: LIM1242018110908		Blast Date: 03/12/2018		Blast Time: 22:39	
Mine Name:	Limestone Mine	Operation:	Production Blasting		
Pit Name:	Pit 2(Western)	Rock Type:	OVER BURDEN		
Bench Name:	Bench 1	Material Blasted:	High Grade		
Zone/Face Name:	1003				
FACE DETAILS			BLAST PATTERN		
Hole Diameter:	115.00	mm	Pattern:	Square	
Face Length:	12.00	m	Rows No:	5	
Hole Angle:	1.00	degree	Total Holes:	27.00	
Sub Grade Drilled:	0.00	m	Burden:	4.50	m
Hole Depth:	6.50	m	Spacing:	5.50	m
BLAST RESULT			POST BLAST EVALUATION		
Volume Broken:	4,343.63	Cu.m	Fly Rock:	0.00	m
Tonnage Recovered:	0.00	ton	Boulder Count:	0.00	nos
Explosive:	603.45	kgs.	Over Break:	0.00	m
Powder Factor:	0.00	ton/kg.	Heavy/Swell:	Good	
Drill Factor:	123.75	ton/m	Muck:	Scattered Muckpile	
Blast Fumes:	No		Stemming Ejection:	No	
VIBRATION			Fragmentation:		
Max PPV:	-	mm/s	Comment:		
Station Distance:	-	m			
ZC Frequency:	-	Hz			
Air Blast:	-	db			
PVS:	-	mm/s			



Figure 19 - Blast Result Report

Explosive and Initiator Consumption

Step 1 - Click on 'Report' tab in the menu bar. Select 'Explosive and Initiator Consumption' from the drop-down menu.

The screenshot shows the BIMS software interface. The top navigation bar includes 'Report', 'Search', and 'Blast History'. The 'Report' menu is open, displaying a list of options: 'Blast Detail and Result', 'Blast Vibration', 'Explosive and Initiator Consumption', 'Daily Production Report', 'Accident & Misfires', and 'Advance Report'. The 'Explosive and Initiator Consumption' option is highlighted, and its sub-menu is visible, listing: 'Blast Wise Consumption Report', 'Date Wise Consumption Report', 'Total Explosive Consumption Report(All Explosives)', 'Total Dth Consumptions Report(All Dth)', and 'Explosive Management Report'. A date range selector is also visible with 'mm/dd/yyyy' and 'To' fields.

Step 2 - You can select the type in which you want the report either 'Consumption Report' or 'Date Wise'.

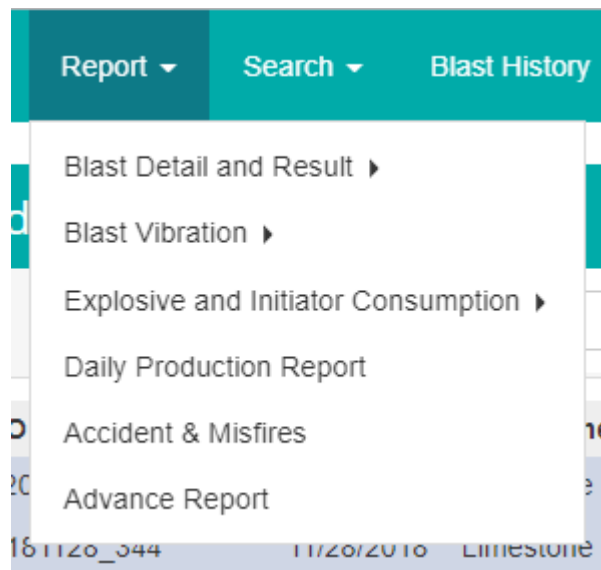



DTH Consumption Report

Mine: Limestone Mine		From: 10/17/2018	To	12/03/2018
S.No.	DTH	Unit Used	Unit Cost	Total Cost
1	Fametric Detonator	217.00	9.56	2,074.52
2	EXEL HANDIDET 15 M	380.00	269.08	1,02,250.40
3	Electric Detonator (00ms)	1.00	8.00	8.00
4	DTH 12 M (250ms)	185.00	180.00	33,300.00
Total		783.00	₹ 116.66	₹ 1,37,632.92

Step 3 - Click 'Close' button. You will be redirected to the home page.

Accident and Misfires



Step 1 – Click on 'Report' tab in the menu bar. Select 'Explosive and Initiator Consumption' from the drop-down menu.

Step 2 – Select a specific date range. Select starting date in the 'From' field and ending date in 'To' field. Click on 'Show Result' button.

Step 3 - Select the particular blast record for which you have to generate the report.

Step 4 - Click 'Show' button. On its click, the report for that particular blast data will be downloaded to the local system.

Step 5 - Click 'Close' button. You will be redirected to the home page.



Accident Detail Report

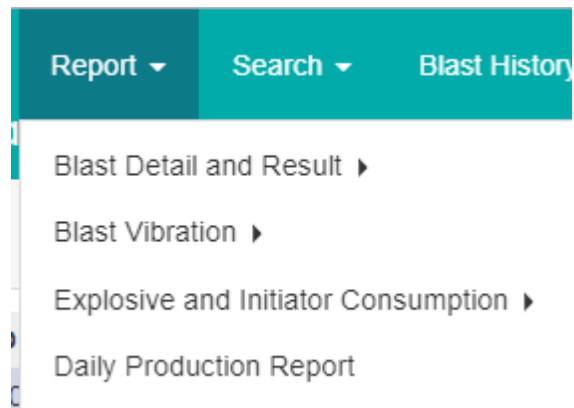
Blast No: LIM1242018110908 **Blast Date:** 03/12/2018 **Blast Time:** 22:39

Mine Name:	Limestone Mine	Operation:	Production Blasting
Pit Name:	Pit 2(Western)	Rock Type:	OVER BURDEN
Bench Name:	Bench 1	Material Blasted:	High Grade
Zone/Face Name:	1003		

Accident Type	Accident Detail	Accident Photo
Nil		

Daily production

This report is use to see daily production report



Step 1: click on daily production report

Step2: enter the from and to date

Step 3: click on radio button

Step 4: Click on Show button.



Daily Production Report

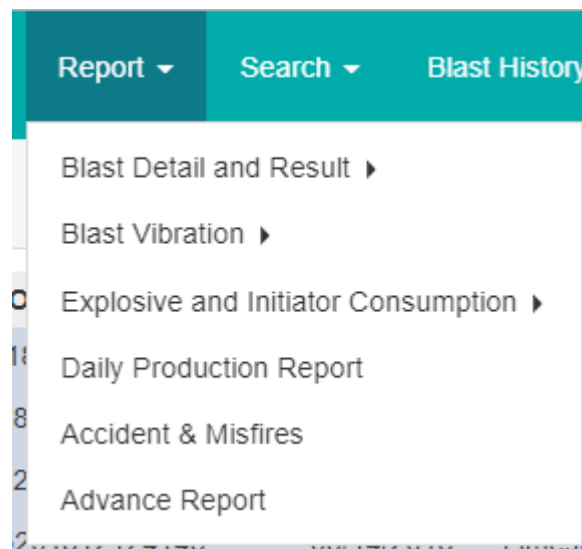
Blast No: BIR_20181002_630 **Blast Date:** 02/10/2018 **Blast Time:** 11:56:30

Mine Name:	Limestone Mine	Operation:	Production Blasting
Pit Name:	Pit 2(Western)	Rock Type:	OVER BURDEN
Bench Name:	Bench 1	Material Blasted:	Medium Grade
Zone/Face Name:	1003		

S.No.	Date	Recovered/Production(Ton)
1	12/5/2018	1,000.00
Total		1,000.00

Advance report

In this report user can see the report quarterly, monthly, yearly and export blast wise.



Step1: Click on Advance report

Step2: Search the report by entering date and month

Quarterly Report

Select Starting Month: Select Ending Month: Select Year: Select Mine:

[Download](#)

Monthly Report

Select Starting Date: Select Ending Date: Select Mine:

[Download](#)

Yearly Report

Select Starting Year: Select Ending Year: Select Mine:

[Download](#)

Export Blast Data

Select Starting Year: Select Ending Year: Select Mine:

[Download](#)

**Step 3: Click on
Download**

[Download](#)

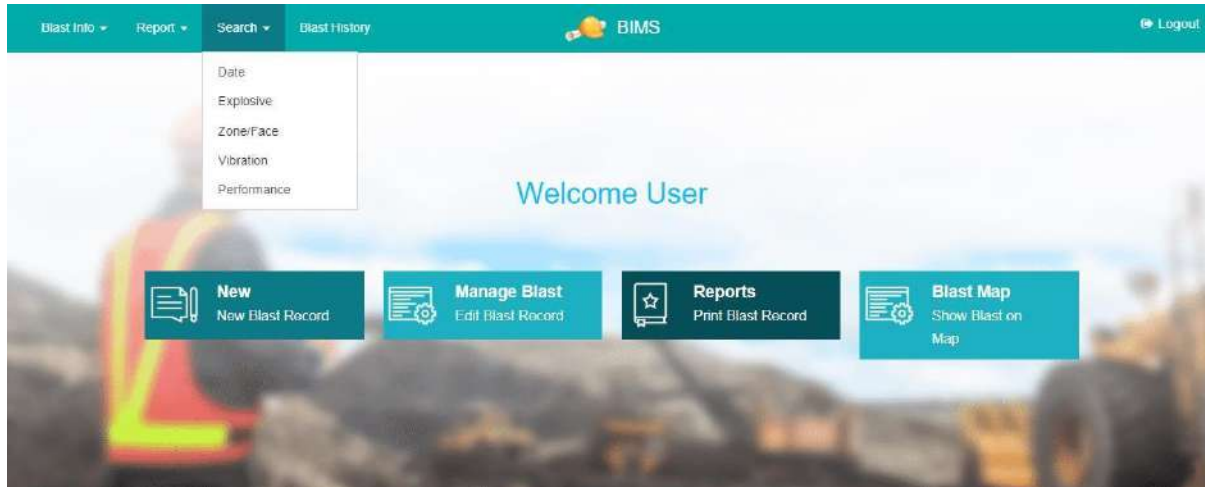
Limestone Mine												
Report Duration	11/5/2018	To	12/5/2018	List Of Blast					No of Blast			4
Blast No.	Date of Blast	Location of Blast	Hole Dia	Hole Depth	No. Of Holes	Avg Burden	Avg Spacing	Avg Stem Length	Avg Charge Hole	Total Charge	Ton Recover	Powder Factor
NAR_2018	27/11/2018	Pit 3 and Bench 2	110.00	10.00	61	4.00	4.00	3.00	58.08	3542.88	0.00	0.00
IRO_2018	28/11/2018	Pit 3 and Bench 2	150.00	12.00	8	5.00	6.00	4.00	126.69	1013.52	0.00	0.00
IRO_2018	28/11/2018	Pit 3 and Bench 2	110.00	10.00	15	3.00	4.00	2.00	62.57	938.55	0.00	0.00
LIM12420	03/12/2018	Pit 2(Western an	115.00	6.50	27	4.50	5.50	5.50	22.35	603.45	0.00	0.00

Report: Monthly report

Search Menu

Date

Step 1 – Click on 'Search' tab in the menu bar. Select 'Date' from the drop down menu.



Step 2 - Select a specific date range. Select starting date in the 'From' field and ending date in 'To' field. Click on 'Show Result' button.

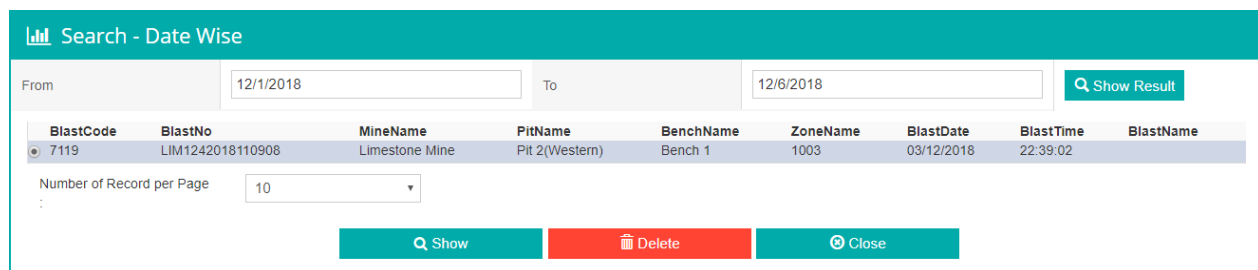


Figure 20 - Search By Date

Step 3: Click on Show button

Zone / Face

Step 1 – Click on 'Search' tab in the menu bar. Select 'Zone/Face' from the drop-down menu.

Step 2 – Select mine name from 'Mine' field. Select pit from the 'Pit' field. Select zone from 'Zone' field.

Blast Info ▾ Report ▾ Search ▾ BIMS [Logout](#)

Zone/Face Report

Search Blast Records meeting following criteria:

Mine: Pit: Zone:

Figure 21 - Search by Zone/Face

Blast Info ▾ Report ▾ Search ▾ BIMS [Logout](#)

Zone/Face Report

Search Blast Records meeting following criteria:

Mine: Pit: Zone:

BlastCode	BlastNo	BlastDate	BlastTime	MineName	PitName	ZoneName	BenchName	Displacement	FlyRock	OverBlock	Boulder
<input checked="" type="radio"/>	246	ABC152017123856	02/07/2013 00:08:28	ABC	Pit 2(Western)	1003	Bench 1	0.00	107.73	0.00	0.00
<input type="radio"/>	256	ABC15201741732	07/07/2013 03:47:00	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
<input type="radio"/>	261	ABC162017100648	30/01/2014 21:36:17	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
<input type="radio"/>	263	ABC162017105420	30/01/2014 22:24:12	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
<input type="radio"/>	264	ABC162017112340	30/01/2014 22:53:28	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
<input type="radio"/>	265	ABC162017114132	31/01/2014 23:11:06	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
<input type="radio"/>	268	ABC162017124829	31/01/2014 00:18:13	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
<input type="radio"/>	376	MIN116201730924	25/04/2014 02:37:54	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
<input type="radio"/>	377	MIN116201735126	26/04/2014 03:21:09	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
<input type="radio"/>	378	MIN116201740656	26/04/2014 03:36:38	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00

1 2 3 4 5 6 7

Step 3 – Click on ‘Find’ button. It will generate a list of blast records related to the selected zone. Select the particular blast record for which you have to generate the report.

Vibration

Step 1 – Click on ‘Search’ tab in the menu bar. Select ‘Vibration’ from the drop-down menu.

Step 2 – Select a mine from the ‘Mines’ list field. It will generate the list of pits in the selected mine. Select a pit from the ‘Pit’ list field.

Blast Info Report Search BIMS Logout

Vibration Wise

Vibration (Search Blast Records meeting following criteria) Mines: ABC Pit: Pit 2(Western)

PPV Less Than mm/s and mm/s Show

Close

Step 3 – Tick PPV checkbox. It will enable the range filter. Select the type of range format in the list field.

Blast Info Report Search BIMS Logout

Vibration Wise

Vibration (Search Blast Records meeting following criteria) Mines: ABC Pit: Pit 2(Western)

PPV Less Than 5.0 mm/s and mm/s Show

Close

Figure 22 - Search by Vibration Value

Fill the value for the range in terms of millimeters per second. Click on 'Show' button.

Blast Info Report Search BIMS Logout

Vibration Wise

Vibration (Search Blast Records meeting following criteria) Mines: ABC Pit: Pit 2(Western)

PPV Less Than 5.0 mm/s and mm/s Show

BlastCode	BlastNo	BlastDate	BlastTime	MineName	PitName	ZoneName	BenchName	Stations	Longitude	Transverse	AirBlast	PPV	
<input checked="" type="radio"/>	246	ABC162017123856	7/2/2013 12:00:00 AM	1/1/1900 12:08:28 AM	ABC	Pit 2(Western)	1003	Bench 1	150	0.00	0.00	117.00	2.76
<input type="radio"/>	261	ABC162017100848	1/30/2014 12:00:00 AM	1/1/1900 9:36:17 PM	ABC	Pit 2(Western)	1003	Bench 1	147	0.00	0.00	128.00	1.23
<input type="radio"/>	263	ADC162017105420	1/30/2014 12:00:00 AM	1/1/1900 10:24:12 PM	ABC	Pit 2(Western)	1003	Bench 1	145	0.00	0.00	128.00	3.58
<input type="radio"/>	264	ABC162017112340	1/30/2014 12:00:00 AM	1/1/1900 10:53:28 PM	ABC	Pit 2(Western)	1003	Bench 1	145	1.00	0.00	120.00	1.80
<input type="radio"/>	268	ABC162017124329	1/31/2014 12:00:00 AM	1/1/1900 12:18:13 AM	ABC	Pit 2(Western)	1003	Bench 1	145	0.00	0.00	128.00	1.13
<input type="radio"/>	376	MIN116201730924	4/25/2014 12:00:00 AM	1/1/1900 2:37:54 AM	ABC	Pit 2(Western)	1003	Bench 1	146	0.00	0.00	128.00	3.13
<input type="radio"/>	379	MIN116201742201	4/26/2014 12:00:00 AM	1/1/1900 3:51:38 AM	ABC	Pit 2(Western)	1003	Bench 1	145	0.00	0.00	128.00	3.69
<input type="radio"/>	381	MIN118201723951	4/27/2014 12:00:00 AM	1/1/1900 2:09:34 AM	ABC	Pit 2(Western)	1003	Bench 1	146	0.00	0.00	128.00	1.16
<input type="radio"/>	382	MIN118201725821	4/27/2014 12:00:00 AM	1/1/1900 2:28:13 AM	ABC	Pit 2(Western)	1003	Bench 1	145	0.00	0.00	110.00	1.14
<input type="radio"/>	383	MIN118201730923	4/30/2014 12:00:00 AM	1/1/1900 2:37:39 AM	ABC	Pit 2(Western)	1003	Bench 1	145	0.00	0.00	128.00	2.11

1 2 3 4 5

Show Close

Step 5 - Click 'Show' button. It will redirect to the 'Blast ID' form page of the selected blast record.

Flyrock

- Tick the **'Fly rock'** check box. Set the range format in the list field. Fill the value of range in terms of meters.
- Tick the **'Overbreak'** check box. Set the range format in the list field. Fill the value of range in terms of meters.
- Tick the **'Boulder'** check box. Set the range format in the list field. Fill the value of range in terms of meters.

The screenshot shows the BIMS Performance Wise Report interface. At the top, there are navigation links for 'Blast Info', 'Report', and 'Search', along with the BIMS logo and a 'Logout' button. The main section is titled 'Performance Wise Report' and contains several filter fields: 'Mine' (ABC), 'Pit' (Pit 2(Western)), 'Fragmentation' (Very Good), and 'MuckPile' (Scattered). Below these are three filter rows for 'FlyRock', 'Overbreak', and 'Boulder'. Each row has a checked checkbox, a 'Less Than' dropdown, a value of '5.0', and a unit of 'm'. There are 'Show' and 'Filter' buttons. At the bottom, a table displays the results of the search.

	BlastCode	BlastNo	BlastDate	BlastTime	MineName	PitName	ZoneName	BenchName	Displacement	FlyRock	OverBlock	Boulder
Select	263	ABC162017105420	1/30/2014 12:00:00 AM	1/1/1900 10:24:12 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select	264	ABC162017112340	1/30/2014 12:00:00 AM	1/1/1900 10:53:28 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select	269	ABC162017124829	1/31/2014 12:00:00 AM	1/1/1900 12:18:13 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select	376	MIN116201730924	4/26/2014 12:00:00 AM	1/1/1900 2:37:54 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select	377	MIN116201735126	4/26/2014 12:00:00 AM	1/1/1900 3:21:09 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select	378	MIN116201740656	4/26/2014 12:00:00 AM	1/1/1900 3:36:38 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select	379	MIN116201742201	4/26/2014 12:00:00 AM	1/1/1900 3:51:38 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select	380	MIN116201722001	4/27/2014 12:00:00 AM	1/1/1900 1:49:52 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select	381	MIN116201723951	4/27/2014 12:00:00 AM	1/1/1900 2:09:34 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00

Figure 23 - Search by Flyrock

Step 5 – Click ‘Filter’ button. It will filter the list according to the range parameters as shown in the image below.

Blast Info		Report	Search	BIMS				Logout			
Select 418	MIN124201714958	5/11/2014 12:00:00 AM	1/1/1900 1:49:42 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 419	MIN124201721007	5/11/2014 12:00:00 AM	1/1/1900 2:02:30 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 420	MIN124201722724	5/12/2014 12:00:00 AM	1/1/1900 2:25:52 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 421	MIN124201731339	5/12/2014 12:00:00 AM	1/1/1900 3:12:52 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 422	MIN124201734735	5/12/2014 12:00:00 AM	1/1/1900 3:47:20 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 423	MIN124201745032	5/14/2014 12:00:00 AM	1/1/1900 4:50:17 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 424	MIN124201750730	5/14/2014 12:00:00 AM	1/1/1900 5:07:01 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 426	MIN124201752423	5/14/2014 12:00:00 AM	1/1/1900 5:24:18 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 426	MIN125201793815	5/15/2014 12:00:00 AM	1/1/1900 9:38:04 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 427	MIN125201794534	5/15/2014 12:00:00 AM	1/1/1900 9:45:22 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 428	MIN125201795637	5/16/2014 12:00:00 AM	1/1/1900 9:56:31 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 429	MIN1252017100909	5/16/2014 12:00:00 AM	1/1/1900 10:08:54 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 430	MIN1252017102417	5/16/2014 12:00:00 AM	1/1/1900 10:24:05 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 431	MIN1252017103221	5/16/2014 12:00:00 AM	1/1/1900 10:32:12 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 432	MIN1252017104531	9/30/2014 12:00:00 AM	1/1/1900 10:45:16 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 433	MIN1252017105736	9/30/2014 12:00:00 AM	1/1/1900 10:57:07 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 434	MIN1252017112001	9/30/2014 12:00:00 AM	1/1/1900 11:19:51 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 436	MIN1252017113632	9/30/2014 12:00:00 AM	1/1/1900 11:36:05 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 436	MIN1252017120009	10/1/2014 12:00:00 AM	1/1/1900 11:59:48 AM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 438	MIN1252017124816	6/5/2015 12:00:00 AM	1/1/1900 12:47:54 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 439	MIN125201713541	6/10/2015 12:00:00 AM	1/1/1900 1:35:34 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 440	MIN125201714319	6/11/2015 12:00:00 AM	1/1/1900 1:43:02 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 441	MIN125201715045	6/18/2015 12:00:00 AM	1/1/1900 1:50:32 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00
Select 627	ABC322017114055	3/1/2017 12:00:00 AM	1/1/1900 11:10:41 PM	ABC	Pit 2(Western)	1003	Bench 1	0.00	0.00	0.00	0.00

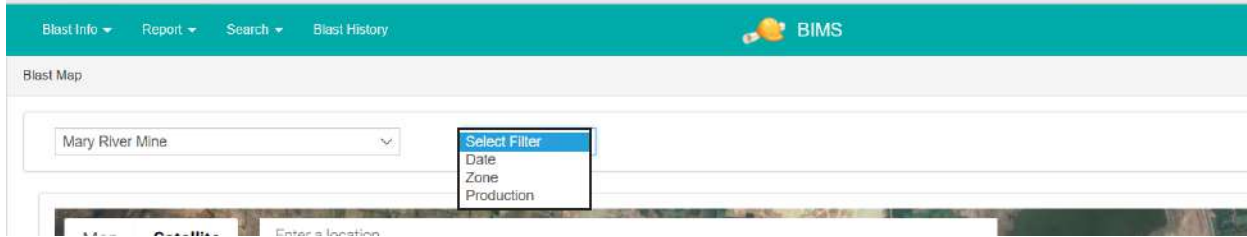
Buttons: Show, Close

Step 6– Click ‘Show’ button. It will redirect to the ‘Blast ID’ form page of the selected blast record. This module is use to see the whole blast on one map in map wise

Blast History

Step1: Select the mine from the drop down list

Step 2: Select the filter option to constraint your search



Step 3 E.g. DATE: Enter from and to date

From To

Step 4: Enter the location of mine

