



Software for Storing, Analyzing, Managing and Retrieving Drilling and Blasting Information Data

Vast amount of drilling and blasting information data are generated during daily production operations. This data needs to be stored, analyzed, audited, documented and managed at various stages of a mine or quarry for planning, controlling and decision-making. The manual methods of data storage and file management take time and resources for providing critical information for making decisions. Blast Information Management System (BIMS) has been developed for storing, managing, and retrieving drill and blast related information to provide better control and optimization of mining and quarrying operations. Appropriate blast designs for particular areas of different geotechnical zones can be identified. Performance and cost of blasts can be monitored and stored in a manner convenient for both quick and future referencing, thereby ensuring systematic archiving of local drilling, blasting and geotechnical experience and data, and transfer of technology between engineers and/or operators.

This tool provides a way of trapping the experience of drilling and blasting personnel in proper documentation of the drilling and blasting process from design through to implementation and results, which can facilitate continuous improvement.

The system generates reports for individual blasts, monthly explosive consumption, stock, cost, vibration monitoring and monthly blast. It also helps in inventory management. It helps in analysis by ability to track interrelationships between the various variables related to geology, design etc. in timely manner, providing with accurate understanding of the operations and ability to provide data to those who need to evaluate operations.

- **Blast ID**
- **Blast Design & Pattern**
- **Explosive Charging Sheet**
- **Blast Cost**
- **Manpower & Associated Cost**
- **Vibration Monitoring Data**
- **Accidents & Misfires**
- **Blast Results & Performance**
 - Videos, Photos, Flyrock & Displacement
- **Fragmentation Analysis**

New Blast Record

Blast Detail | Blast Design | Pattern | Charging Sheet | Blast Cost | Manpower & Associated Cost

Vibration Monitoring | Accidents & Misfires | Blast Results | Fragmentation Analysis

[Vibration Monitoring]

[Weather Information]

Weather: Clear Sky | Wind Speed: Mild Breeze | Wind Direction: East | Temperature: 0

Comments:

[Vibration Monitoring]

Station	Nothing	Easting	Reduce Level	Distance	Instrument
Dapla-Ka-Badia	0	0	0	300	Blastmate DS 6

[Details of Vibration Monitoring]

Station: Dapla-Ka-Badia | Instrument: Blastmate DS 677 - InstanTel | Vibration File: 005aPhotos\SHK3012200401Vib003.jpg

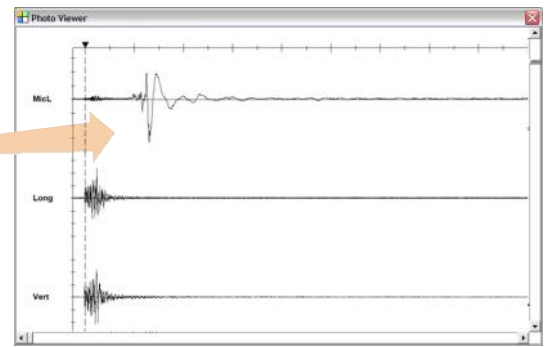
Northing: 0 | Coupling: Plastibond | Operator: S.BHANDARI

Easting: 0 | Longitudinal: 2.46 mm/s | Air Blast: 9.5 | Witness: GLNANDWANA

Reduce Level: 0 | Transverse: 3.25 mm/s | Peak Vector Sum: 3.62 mm/s | Analyst: S.BHANDARI

Distance: 300 | Vertical: 1.83 mm/s

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BIMS has been developed to run on PC under Microsoft 98/2000/XP using Microsoft Access database. The use of databases allows an efficient way to manage and query the vast amount of information generated from the day to day blasting activities to meet the strategic and operational needs for the mines/quarries. The programme can be customized to link with organization management information system. The PC based database software has been designed to be user friendly and require little training as such it easy for mine personnel to use.

BLAST DETAILS

Blast No.: 150K2912200402 | Blast Date: 20/12/2004 | Blast Time: 2:56:40 PM

Mine Name: SHEOPURA KESHARPURA | Pit Name: PIT 2 (EASTERN)

Section Name: BENCH II (EASTERN) | Zone Name: LIME STONE 1

Operation: Controlled Blasting | Mine Status: RPS Grade | Rock Type: LIME STONE 1 | Density: 2.50

Face Details:

Face Dia	Face Height	Face Angle	Sub Grade
165.00 mm	8.00 m	90.00 degree	.00 m

Blast Pattern:

Pattern	Spaced
Pattern	Spaced

Post Blast Evaluation:

Volume Broken	Tonnage Recovered	Boulder Count	Explosive	Powder Factor	Drill Factor	Blast Fumes
4860.00 ton	12441.60 ton	20.00	1924.29 kg	1.15 kg/ton	51.20 m/ton	YES



Reports

BIMS - Earth Resource Centre

Mine Info | Blast Info | Reports | Search | System | Help | Exit

Complete Blast
Blast Vibration
Explosive Consumption
Cost Analysis

Search Criteria

BIMS - Earth Resource Centre

Mine Info | Blast Info | Reports | Search | System | Help | Exit

Tree View
Date
Performance
Explosive
Accident
Zone

Tree View Details of Blast

SHEOPURA KESHARPURA

- PIT 2 (EASTERN)
 - LIME STONE 1
 - BENCH II EAST
 - BENCH II MIDDLE
 - PRODUCTION
 - 2004
 - DECEMBER
 - SHK2412200401
 - SHK2812200401
 - SHK2912200401
 - SHK2912200402
 - DESIGN
 - BLAST COST
 - EXPLOSIVE CONSUMED
 - BLAST RESULT
 - FRAGMENTATION
 - VIDEO
 - PHOTO

Close

[Blast Result]

Theoretical Production in Volume: 4860 Cu.M | Tonnage recovered from Face: 13000 Ton

Theoretical Production (Tonnage): 12441.6 Tonne | Total Charge Weight: 0 m

Total Explosive Consumed: 1924.29 Kgs. | Total Stemming Length: 100 m

Powder Factor: 0.15 Kg/Ton | Drill Meterage: 243.00 m

Drill Factor: 51.20 m/Ton

[Performance]

Flyrock (m): 20 | Stemming Ejection: Yes

Heave/Swell: Good | Muck Profile: Tight Muckpile

Boulder Count: 20 | Blasting Fumes: Yes

Displacement (m): 10 | Overbreak (m): 1.2

Comments: Blast was Ok

New Blast Record

Blast Detail | Blast Design | Pattern | Charging Sheet | Blast Cost | Manpower & Associated Cost

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[Manpower & Associated Cost]

[Associated Blasting Cost]

| Description | Per Hour Cost | Working Hour | Quantity | Total Cost |
|--------------------|---------------|--------------|----------|------------|
| Manpower - Blaste | 65.16 | 8.00 | 1.00 | 521.28 |
| Manpower - Helpe | 65.16 | 8.00 | 3.00 | 1563.84 |
| Other | 65.16 | 8.00 | 6.00 | 3127.68 |
| Manpower - Forem | 100.00 | 8.00 | 1.00 | 800.00 |
| Blasting Insurance | 2.00 | .00 | .00 | .00 |

[Details]

Description: Blasting Insurance

Cost Per Hour: 2.00 | Working Hour: 0

Total Nos: 0 | Total Cost: 0

Total Manpower & Associated Blasting Cost: 5012.80

Drill Cost Per Meter: 60.00

Total Meterage Drill: 72.00

Total Drill Cost: 4320.00

Total Cost (MANPOWER+ASSOCIATED + DRILL): 10332.80

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[Blast Result]

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Comments: Blast was Ok

Photo: D:\NewBIMS\BIMS17032005\Photos\SHK2912200402P.jpg

Video: D:\NewBIMS\BIMS17032005\Videos\SHK2912200402V.MPG

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