



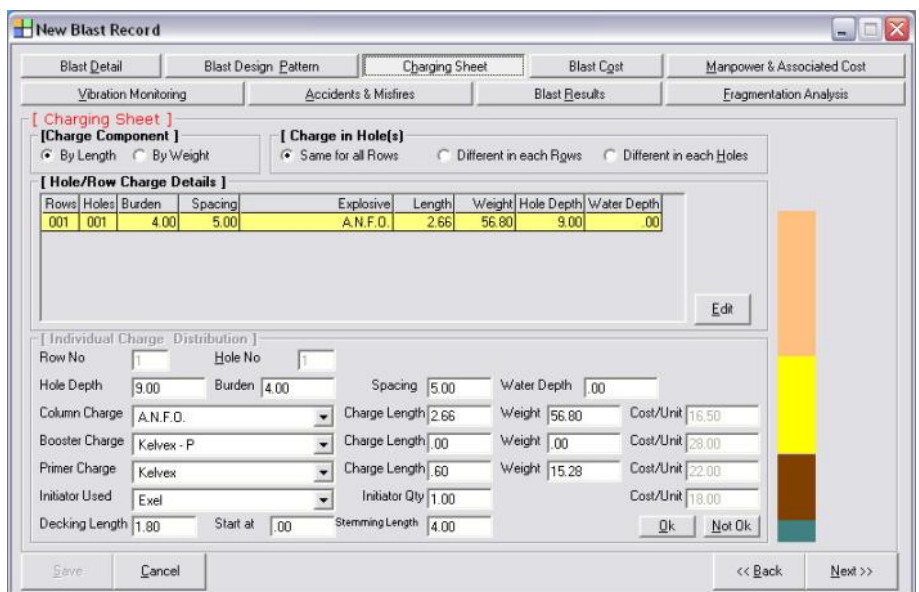
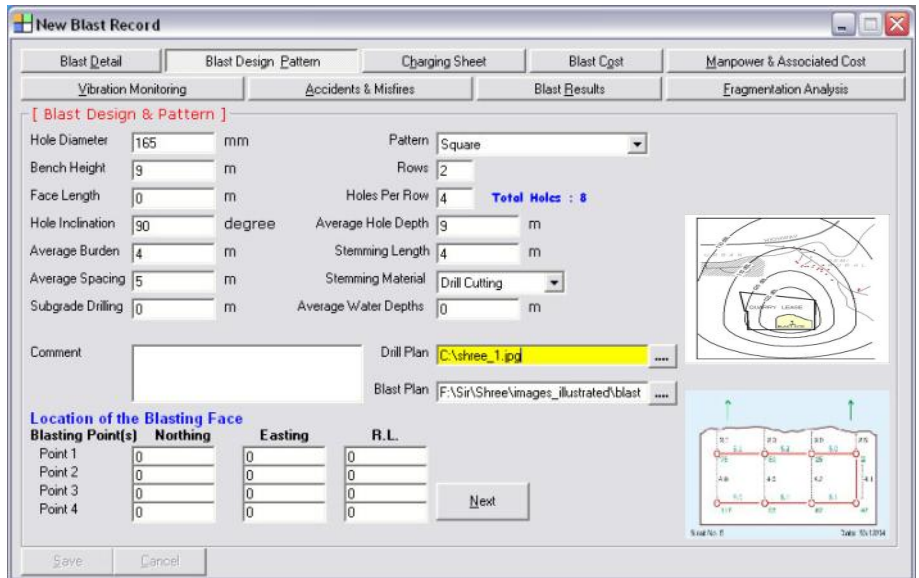
**Software for Storing, Analyzing, Managing and Retrieving  
Drilling and Blasting Information Data**

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 ]**

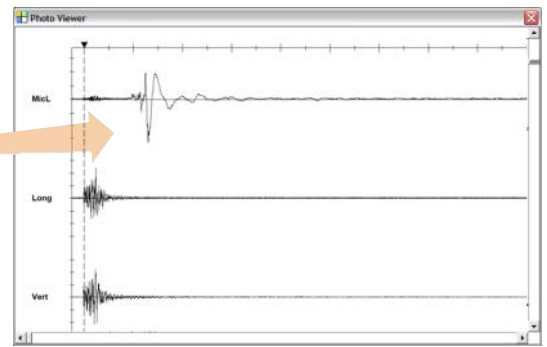
Station	Nothing	Easting	Reduce Level	Distance	Instrument
Dapla-Ka-Badia	0	0	0	300	Blastmate DS 6

**[ Details of Vibration Monitoring ]**

Station: Dapla-Ka-Badia | Instrument: Blastmate DS 677 - Instanet  
 Northing: 0 | Coupling: Plastibond  
 Easting: 0 | Longitudinal: 2.46 mm/s | Air Blast: 9.5  
 Reduce Level: 0 | Transverse: 3.25 mm/s | Peak Vector Sum: 3.62 mm/s  
 Distance: 300 | Vertical: 1.83 mm/s

Vibration File: 0056Photos\SHK3012200401VIB003.jpg  
 Operator: S.BHANDARI  
 Witness: G.L.NANDWANA  
 Analyst: S.BHANDARI

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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: 150291220042 | Blast Date: 20/12/2004 | Blast Time: 2:56:40 PM

Mine Name: SHEOPURA KESHARPURA  
 Pit Name: PIT 2 (EASTERN)  
 Bench Name: BENCH II (MIDDLE)  
 Zone Name: LIME STONE 1  
 Operation: Controlled Blasting  
 Mine Level: 875 Grade  
 Rock Type: LIME STONE 1 | Density: 2.50

**Face Details**

Face	Height	Width	Angle	Sub Grade
Hole Dia	85.00	mm		
Face Height	8.00	m		
Hole Angle	90.00	degree		
Sub Grade	.00	m		

**Blast Pattern**

Pattern	Spacers
Fly Rock	20.00
Boulder Count	20.00
Over Break	3.00
Heave/Swell	0.00
Muck Profile	Tight Muckpile
Blasting Fumes	Yes
Stemming Ejection	Yes

**Blast Result**

Volume Broken	Tonnage Recovered	Blasting Factor	Drill Factor	Blast Fumes
4860.00	12441.60	1.15	51.20	YES

**Post Blast Evaluation**

Fly Rock	Boulder Count	Over Break	Heave/Swell	Muck Profile	Blasting Fumes	Stemming Ejection
20.00	20.00	3.00	0.00	Tight Muckpile	Yes	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
  - 2005
    - CONTROLLED SECONDARY
    - BENCH II WEST
    - WASTE SHALE

PIT 2 (WESTERN)

**[ Blast Result ]**

Theoretical Production in Volume	4860	Cu.M
Theoretical Production in Tonnage	12441.6	Tonne
Total Explosive Consumed	1924.29	Kgs.
Powder Factor	0.15	Kg/Ton
Drill Factor	51.2	m/Ton
Tonnage recovered from Face	13000	Ton
Total Charge Length	0	m
Total Stemming Length	100	m
Drill Meterage	243	m

**[ 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

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

**[ Manpower & Associated Blasting 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	1963.84
Other	65.16	8.00	6.00	3127.68
Manpower - Forerr	100.00	8.00	1.00	800.00
Blasting Insurance	2.00	.00	.00	.00
	0	0	0	0

**[ Details ]**

Description: Blasting Insurance  
 Cost Per Hour: 2.00 | Working Hour: 0  
 Total Nos: 0 | Total Cost: 0

Total Manpower & Associated Blasting Cost: 6012.80  
 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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**New Blast Record**

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**[ Blast Result ]**

Theoretical Production in Volume	4860.00	Cu.M	Tonnage recovered from Face	13000	Ton
Theoretical Production(Tonnage)	12441.60	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

Photo: D:\NewBIMS\BIMS17032005\Photos\SHK2912200402P.jpg  
 Video: D:\NewBIMS\BIMS17032005\Videos\SHK2912200402V.MPG

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