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Kozhikode, Kerala, India

MUHAMMAD RIYAS K

Mining Engineer with hands on experience in open pit and underground operations while specializing in deep hole drilling, long-diameter blast hole design, and the safe execution of drill-and-blast activities across multi commodity sites. Strong understanding of mining requirements, including production planning, resource utilization, HSE compliance, and blast documentation aligned with regional operational standards. Proficient in mine planning workflows, underground survey integration, and implemented a practical blast-layout refinement that improved fragmentation and wall to wall linkage, which contributed to better production flow and reduced idle time. Eager to contribute to large-scale GCC mining projects with a strong interest in drilling, blasting operations, production optimization, and crusher-associated activities.

SKILLS

- Drill & Blast Operations
- Electronic Detonators
- Open-Pit & Underground Operations
- Blast Layout Optimization
- Zero Harm Safety practices
- Long-Hole Drilling
- Vibration Monitoring & Control
- Statutory Blast Documentation
- Production Scheduling
- Resource Utilization & Cost Control
- Fleet & Manpower Management
- Controlled Blasting Techniques
- Leadership
- Adaptability
- Underground Mine Surveying (Total Station, 3D Mapping)
- Crusher Operation Monitoring
- Ventilation & Rock Mechanics Exposure
- Sand Stowing & Underground Support Techniques
- Blast Plan Preparation

EXPERIENCE

MINING ENGINEER
Matha Industries Quarry, Kerala, India | Jan 2025 – Present

- Oversees drilling, blasting, excavation, and overall production activities to maintain safe and continuous open pit operations.
- Introduced an improved NONEL-based bench-to-bench connection method that expanded blast coverage, increased usable blast area, and supported smoother fragmentation and production flow.
- Ensures compliance with statutory drilling and blasting norms, vibration control requirements, and Zero Harm safety standards.
- Coordinates with geologists to ensure accurate grade control, efficient excavation, and optimal resource utilization.
- Manages fleet deployment, manpower distribution, and multi-shift operations to support production scheduling and maintain cost efficiency.
- Monitors crusher performance, fragmentation quality, mucking efficiency, and equipment availability to minimize operational delays.
- Prepares and maintains statutory documentation including drill plans, primary/secondary blast plans, and vibration monitoring reports.

GRADUATE ENGINEER TRAINEE
Hutti Gold Mines Ltd, Karnataka, India | Jan 2024 – Jan 2025

- Executed long-diameter blast hole drilling and blasting operations using electronic detonators in underground gold mining environments.
- Supported development activities including drives, crosscuts, and stope preparation for production advancement.
- Conducted underground mine surveying using Total Station, performing resection, backsight, and 3D mapping for Surpac data integration.
- Assisted in ventilation monitoring, safety inspections, and compliance with DGMS standards and underground statutory requirements.

GRADUATE ENGINEER TRAINEE
Talvane Iron Ore Mine, Maharashtra, India | Sep 2022 – Sep 2023

- Carried out deep-hole drilling and blasting operations in open-pit iron ore production using controlled blasting methods including trim blasting, presplitting, smooth blasting, and line drilling.
- Prepared blast layouts, ensured accurate stemming practices, and assisted the Blasting In-Charge during charging and initiation processes.
- Monitored fragmentation, mucking operations, and ore movement to support production optimization.

INTERN | 1-Month
Kerala Minerals and Metals Ltd. (KMML), Kerala, India

- Observed beach sand mining operations and mineral separation workflows including High Tension Electrostatic Separation, Induced Roll Magnetic Separation, Spiral Concentration, Hydro-Cyclones, and Fluidized Bed Drying.
- Gained exposure to synthetic rutile production stages, feed preparation, separation processes, and large-scale plant operations.

TECHNICAL CONTRIBUTIONS

NONEL Blast Layout Refinement for Improved Coverage
Introduced an Idea by using 4-meter NONEL connections instead of the standard 3-meter lines, allowing improved reach between benches and increasing the effective blastable volume. The extended span strengthened blast continuity, reduced unbroken pockets, and supported smoother fragmentation and more efficient production cycle while maintaining a safe, non-electric initiation setup.

Underground Mine Survey & 3D Mapping Integration
Conducted one-month underground mine surveying at Hutti Gold Mines using Total Station (resection, stakeout, orientation setting, and backsight) to capture accurate angles, distances, and elevations. Generated 3D mine layout maps and integrated survey datasets into Surpac for planning and reporting.

Exposure to Mineral Processing and Metallurgical Operations
Observed critical plant operations at Hutti Gold Mines, including the SAG mill, Carbon-in-Pulp (CIP) processing unit, and assay laboratory workflows.

CERTIFICATIONS

- IOSH Managing Safely
- Underground Mine Survey Training – Hutti Gold Mines Ltd
- Mineral Processing & Metallurgy Exposure Training – HGML (SAG Mill, CIP Unit, Assay Lab)
- Industrial Training – Kerala Minerals and Metals Ltd. (KMML)

ACADEMIC CREDENTIALS

B. Tech in Mining Engineering | Aditya Engineering College (2018–2022)
First Class | CGPA: 7.28

PROJECTS

Noise Survey in Underground Mining
Performed a noise-level assessment on mechanized underground equipment and identified high-exposure sources. Documented findings and recommended basic precautions

COMPUTER SKILLS

- Surpac (Basic Familiarity)
- AUTOCAD
- MS Office

LANGUAGES KNOWN

- English
- Malayalam
- Hindi
- tamil
- Telugu