



The Institute of Quarrying  
AUSTRALIA

# QUARRY OPERATIONS JOB ROLE PROFILES



# CONTENTS

<b>1</b>	<b>ON-SITE OPERATIONS ROLES</b>	<b>3</b>
	Quarry Operator Trainee	4
	Quarry Operator	5
	Senior Quarry Operator (Leading Hand)	6
	Quarry Supervisor	7
	Quarry Manager	8
<b>2</b>	<b>ADMINISTRATION &amp; SUPPORT ROLES</b>	<b>10</b>
	Weighbridge Operator	11
	Site Administrator	11
	Accounts / Payroll Officer	11
	HR / Training Coordinator	11
<b>3</b>	<b>TRADES &amp; MAINTENANCE ROLES</b>	<b>12</b>
	Mechanical Fitter (Mobile Plant)	13
	Boilermaker / Welder	13
	Electrician (Industrial)	13
	Automotive - Diesel Fitter	13
<b>4</b>	<b>EXTERNAL SPECIALISTS &amp; CONTRACTORS</b>	<b>14</b>
	Drill & Blast Contractor	15
	Surveyor	15
	Geotechnical Engineer	15
	Environmental Officer / Consultant	15
	Safety Advisor / Consultant	15
<b>5</b>	<b>TECHNICAL &amp; PROFESSIONAL SPECIALIST ROLES</b>	<b>16</b>
	Production Engineer	17
	Mining Engineer (Quarry Planning)	17
	Quality Control Technician	17
	IT / Fleet Systems Support Officer	17
	<b>CONCLUSION</b>	<b>18</b>



**1.**

# **ON-SITE OPERATIONS ROLES**

# QUARRY OPERATOR TRAINEE

The Quarry Operator Trainee role provides hands-on training and experience in quarrying operations. Under supervision, trainees will learn to safely operate mobile and fixed plant, follow site procedures, and support production activities while completing a nationally recognised qualification.

<b>Purpose</b>	Entry-level role providing training in safe quarry operations
<b>Responsibilities</b>	Assist plant operators, learn mobile equipment operation, complete safety inductions
<b>Skills/Qualifications</b>	No experience required, White Card, willingness to learn, Certificate III in Surface Extraction
<b>Environment</b>	On-site, supervised, rotating tasks
<b>Salary Range</b>	\$45K-\$75K

## KEY RESPONSIBILITIES

### LEARNING & DEVELOPMENT

- Participate in structured training, including Certificate III in Surface Extraction Operations (traineeship)
- Learn to operate quarry plant and equipment under supervision
- Develop an understanding of quarry processes, safety procedures, and environmental responsibilities

### OPERATIONAL SUPPORT

- Assist experienced operators with extraction, crushing, and screening tasks
- Carry out general labouring duties such as site clean-up, road maintenance, and stockpile management
- Learn to conduct pre-start checks and basic machine care

### SAFETY & COMPLIANCE

- Follow all site safety protocols and wear required PPE
- Participate in toolbox talks, safety drills, and training sessions
- Report hazards, near misses, and incidents to supervisors

### TEAMWORK & COMMUNICATION

- Work alongside experienced operators and supervisors
- Listen, ask questions, and seek guidance when unsure
- Develop communication skills for use with team members and on-site radios

### SKILLS & ATTRIBUTES

- Willingness to learn and apply new skills
- Strong awareness of safety and responsibility
- Reliable, punctual, and physically fit for outdoor work
- Positive attitude and ability to work as part of a team

### QUALIFICATIONS & REQUIREMENTS

- Commitment to completing a traineeship in Certificate III in Surface Extraction Operations
- Current driver's licence (P-plate or higher)
- White Card (Construction Induction)
- No prior quarrying experience required

### CAREER PATHWAYS

- Quarry Operator
- Senior Quarry Operator

## QUARRY OPERATOR

A Quarry Operator is responsible for the safe and efficient operation of quarry equipment and plant to extract, process, and transport raw materials (such as aggregates, sand, gravel, and stone). The role involves equipment operation, site safety compliance, and contributing to the production of high-quality products for construction and industrial use.

<b>Purpose</b>	Operate mobile plant and equipment to extract, move, and process raw materials
<b>Responsibilities</b>	Operate loaders, haul trucks, and crushing equipment; maintain production flow; follow safety protocols production flow; follow safety protocols
<b>Skills/Qualifications</b>	Mobile plant tickets, experience in quarry/mining, Certificate III in Surface Extraction
<b>Environment</b>	Outdoor, plant-based, PPE required
<b>Salary Range</b>	\$70K-\$100K

### KEY RESPONSIBILITIES

#### EQUIPMENT OPERATION

- Operate a range of quarrying machinery, including excavators, loaders, haul trucks, crushers, and screening plants
- Carry out routine machine checks, maintenance, and minor repairs

#### PRODUCTION & PROCESSING

- Assist in the extraction, crushing, and screening of raw materials
- Monitor production output to meet required specifications and quality standards

#### SAFETY & COMPLIANCE

- Follow site safety procedures, risk assessments, and environmental guidelines
- Participate in toolbox talks and safety briefings
- Identify and report hazards, incidents, or near misses

#### TEAMWORK & COMMUNICATION

- Work collaboratively with other operators, drivers, and supervisors
- Communicate effectively on two-way radios and with supervisors regarding tasks and site conditions

#### GENERAL DUTIES

- Assist with stockpiling, loading trucks, and maintaining haul roads
- Perform general labouring tasks when required, such as site clean-up

#### SKILLS & ATTRIBUTES

- Strong awareness of workplace health and safety
- Ability to operate heavy mobile plant safely and efficiently
- Good communication and teamwork skills
- Mechanical aptitude for identifying equipment issues
- Physically fit and able to work in outdoor, dusty, and noisy environments

#### QUALIFICATIONS AND TRAINING

- Certificate II or III in Surface Extraction Operations (desirable)
- Current driver's licence (mandatory)
- Quarry mobile plant operator tickets (e.g., loader, excavator, haul truck)
- White Card (Construction Induction Card)

#### WORKING CONDITIONS

- Outdoor, physically demanding environment
- Exposure to noise, dust, and weather conditions
- Work may involve rotating shifts, weekends, and overtime depending on production requirements
- Strict adherence to personal protective equipment (PPE) requirements

#### CAREER PATHWAYS

- Senior Operator
- Quarry Supervisor
- Quarry Manager
- Safety Officer / Trainer in Extractive Industries

# SENIOR QUARRY OPERATOR / LEADING HAND

The Senior Quarry Operator is an experienced operator responsible for leading by example in the safe and efficient use of quarry equipment and plant. This role provides on-the-job support to operators, assists with training, and takes responsibility for production areas or shifts when delegated by the Quarry Supervisor.

<b>Purpose</b>	Lead operator providing guidance to team members and supporting supervisors
<b>Responsibilities</b>	Mentor operators, monitor safety compliance, troubleshoot plant/equipment
<b>Skills/Qualifications</b>	Advanced plant operating experience, leadership capability
<b>Environment</b>	Field-based, frequent interaction with supervisors
<b>Salary Range</b>	\$90K-\$110K

## KEY RESPONSIBILITIES

### OPERATIONAL DUTIES

- Operate quarry mobile plant and fixed plant safely and efficiently
- Support the Supervisor in meeting daily production targets
- Monitor material quality, stockpiling, and load-out processes

### SAFETY & LEADERSHIP

- Promote a strong safety culture and lead pre-start/toolbox meetings as required
- Mentor and assist in training new operators
- Report hazards, incidents, and equipment issues promptly

### TEAM SUPPORT

- Provide direction to operators during shifts in the Supervisor's absence
- Work collaboratively with maintenance and truck drivers to ensure workflow efficiency
- Support continuous improvement initiatives on site

### EQUIPMENT & MAINTENANCE

- Carry out daily checks, routine maintenance, and assist with repairs
- Provide feedback on machine performance and efficiency

### SKILLS & ATTRIBUTES

- Experienced and skilled in operating multiple types of quarry machinery
- Strong safety focus and ability to model safe work practices
- Good communication and leadership potential
- Practical problem-solving and troubleshooting skills
- Ability to train, guide, and mentor less experienced staff

### QUALIFICATIONS & EXPERIENCE

- Certificate II or III in Surface Extraction Operations
- Current driver's licence and relevant plant operator tickets
- White Card (Construction Induction)
- Several years' experience in quarrying, mining, or earthmoving
- Leadership training and/or experience

### CAREER PATHWAYS

- Quarry Supervisor
- Quarry Manager
- Trainer/Assessor in Extractive Operations
- Safety Representative / Leading Hand

# QUARRY SUPERVISOR

The Quarry Supervisor oversees daily quarrying operations to ensure safe, efficient, and compliant extraction and processing of raw materials. This role provides leadership to quarry operators and contractors, ensuring production targets, safety standards, and environmental obligations are met.

<b>Purpose</b>	Frontline leader ensuring safe, efficient quarry production supervisors
<b>Responsibilities</b>	Allocate tasks, oversee production, ensure compliance, supervise operators
<b>Skills/Qualifications</b>	Leadership experience, Certificate IV in Surface Extraction desirable
<b>Environment</b>	Split office/field role
<b>Salary Range</b>	\$110K-\$150K

## KEY RESPONSIBILITIES

### OPERATIONAL LEADERSHIP

- Supervise day-to-day extraction, crushing, and screening activities
- Allocate tasks, manage shifts, and ensure production schedules are met
- Monitor stock levels, quality, and efficiency of material production

### SAFETY & COMPLIANCE

- Enforce workplace health and safety standards across the site
- Conduct daily pre-start meetings, toolbox talks, and safety inspections
- Ensure compliance with environmental and regulatory requirements

### TEAM MANAGEMENT

- Provide guidance, training, and mentoring to operators and contractors
- Monitor staff performance and provide feedback
- Assist with workforce planning and rostering

### EQUIPMENT & MAINTENANCE

- Oversee the safe use and upkeep of quarry machinery and fixed plant
- Report and coordinate repairs, servicing, and maintenance schedules

### REPORTING & ADMINISTRATION

- Maintain accurate records of production, safety, and incidents
- Prepare reports for the Quarry Manager on performance and issues
- Assist in implementing continuous improvement initiatives

### SKILLS & ATTRIBUTES

- Strong leadership and decision-making skills
- Sound knowledge of quarry operations, equipment, and production processes
- Excellent communication and problem-solving abilities
- Commitment to safety and environmental compliance
- Ability to mentor and develop team members

### QUALIFICATIONS & EXPERIENCE

- Certificate III or IV in Surface Extraction Operations (or equivalent)
- Current or pursuing Quarry Manager's Practicing Certificate (state-dependent)
- White Card (Construction Induction)
- Demonstrated supervisory or leading hand experience in quarrying
- High-level understanding of WHS and environmental obligations

### CAREER PATHWAYS

- Quarry Manager
- Operations Manager

## QUARRY MANAGER

The Quarry Manager is responsible for the overall management and leadership of the quarry site. This includes planning and coordinating extraction activities, managing staff and contractors, ensuring compliance with legislation and safety standards, and delivering production targets. The role requires a balance of operational oversight, people management, and business performance accountability.

<b>Purpose</b>	Overall responsibility for safe, compliant, and efficient quarry operations
<b>Responsibilities</b>	Strategic planning, compliance with legislation, manage budgets, oversee staff/contractors
<b>Skills/Qualifications</b>	Quarry Manager's Certificate (state-dependent), extensive leadership experience
<b>Environment</b>	Office/site-based, regulatory engagement
<b>Salary Range</b>	\$150K+

### KEY RESPONSIBILITIES

#### STRATEGIC & OPERATIONAL LEADERSHIP

- Develop and implement quarry production plans to meet sales and operational goals
- Monitor extraction activities, material quality, and stock management
- Manage budgets, cost control, and resource allocation

#### SAFETY, COMPLIANCE & RISK MANAGEMENT

- Ensure full compliance with Work Health and Safety (WHS) legislation, environmental laws, and extractive industry regulations
- Maintain the Quarry Management Plan and site risk assessments
- Oversee emergency preparedness and incident response
- Ensure site inspections, audits, and reporting requirements are completed

#### PEOPLE & CONTRACTOR MANAGEMENT

- Lead, supervise, and develop quarry supervisors, operators, and contractors
- Foster a strong safety culture and promote teamwork across all site personnel
- Conduct performance reviews, provide feedback, and manage training needs

#### EQUIPMENT, PLANT & INFRASTRUCTURE

- Oversee the safe use, servicing, and maintenance of fixed and mobile plant
- Plan capital improvements, repairs, and upgrades to plant and equipment

#### BUSINESS & STAKEHOLDER MANAGEMENT

- Liaise with company leadership, regulators, local communities, and client
- Prepare reports on production, compliance, costs, and performance
- Support continuous improvement, innovation, and sustainability initiatives

#### SKILLS & ATTRIBUTES

- Strong leadership and organisational skills
- In-depth knowledge of quarrying, geology, extraction methods, and processing
- Excellent communication and stakeholder management skills
- Commercial acumen with a focus on cost control and productivity
- Ability to manage risk, compliance, and regulatory obligations

continued



# QUARRY MANAGER

## KEY RESPONSIBILITIES

### QUALIFICATIONS & EXPERIENCE

- Certificate IV, Diploma, or higher in Surface Extraction Operations, Mining, or equivalent
- Current Quarry Manager's Practising Certificate (state-specific regulatory requirement)
- White Card (Construction Induction)
- Extensive experience in quarrying or mining, with proven leadership in supervisory or management roles
- Strong understanding of WHS, environmental legislation, and quality control

### WORKING CONDITIONS

- Primarily site-based with exposure to outdoor, noisy, and dusty environments
- Regular interaction with regulators, contractors, and corporate teams
- May require extended hours or weekend work to meet operational demands

### CAREER PATHWAYS

- Regional Operations Manager
- General Manager – Extractive Industries
- Senior Consultant / Compliance Specialist in Quarrying



2.

## ADMINISTRATION & SUPPORT ROLES

## WEIGHBRIDGE OPERATOR

<b>Purpose</b>	Manages truck movements, weighbridge systems, and customer deliveries operations
<b>Responsibilities</b>	Weigh trucks, issue dockets, process sales, maintain delivery records
<b>Skills/Qualifications</b>	Computer literacy, customer service skills
<b>Environment</b>	Office-based at site entrance

## SITE ADMINISTRATOR

<b>Purpose</b>	Provides administrative support and record-keeping for quarry operations
<b>Responsibilities</b>	Manage documentation, compliance, and procurement
<b>Skills/Qualifications</b>	Admin/office experience, computer literacy
<b>Environment</b>	Office-based, supports managers and staff

## ACCOUNTS / PAYROLL OFFICER

<b>Purpose</b>	Manages payroll and accounts functions.
<b>Responsibilities</b>	Process invoices, payroll, financial reporting
<b>Skills/Qualifications</b>	Accounting and finance qualifications, experience with accounting/payroll systems
<b>Environment</b>	Office-based

## HR / TRAINING COORDINATOR

<b>Purpose</b>	Supports workforce recruitment, onboarding, and training
<b>Responsibilities</b>	Manage HR compliance, training plans, records
<b>Skills/Qualifications</b>	HR background, Training and Assessment desirable
<b>Environment</b>	Office and site visits



**3.**

**TRADES &**

**MAINTENANCE ROLES**

## MECHANICAL FITTER (MOBILE PLANT)

<b>Purpose</b>	Maintains and repairs fixed and mobile plant
<b>Responsibilities</b>	Perform servicing, breakdown repairs, and preventative maintenance
<b>Skills/Qualifications</b>	Trade-qualified fitter, experience with heavy equipment
<b>Environment</b>	Workshop and site based

## BOILERMAKER / WELDER

<b>Purpose</b>	Fabricates and repairs quarry equipment and structures
<b>Responsibilities</b>	Welding, fabrication, structural repairs
<b>Skills/Qualifications</b>	Trade-qualified boilermaker/welder
<b>Environment</b>	Workshop and plant site

## ELECTRICIAN (INDUSTRIAL)

<b>Purpose</b>	Maintains quarry electrical systems
<b>Responsibilities</b>	Troubleshoot, repair, and install electrical equipment
<b>Skills/Qualifications</b>	Electrical trade qualification, high voltage/PLC knowledge preferred
<b>Environment</b>	Site-based

## AUTOMOTIVE - DIESEL FITTER

<b>Purpose</b>	Maintains and repairs mobile fleet (loaders, trucks, excavators)
<b>Responsibilities</b>	Preventative maintenance, fault diagnosis, repairs
<b>Skills/Qualifications</b>	Trade-qualified diesel mechanic
<b>Environment</b>	Workshop/field service



4.

## EXTERNAL SPECIALISTS & CONTRACTORS

## DRILL & BLAST CONTRACTOR

<b>Purpose</b>	Designs and executes safe blasting operations.
<b>Responsibilities</b>	Drill patterns, load explosives, detonate under safety compliance
<b>Skills/Qualifications</b>	Explosives licence, blasting competency
<b>Environment</b>	On-site, high safety protocols

## SURVEYOR

<b>Purpose</b>	Provides accurate survey data for planning and compliance
<b>Responsibilities</b>	Conduct stockpile surveys, pit designs, and boundary mapping
<b>Skills/Qualifications</b>	Surveying degree/diploma, GPS/laser scanning
<b>Environment</b>	Field and office

## GEOTECHNICAL ENGINEER

<b>Purpose</b>	Assesses quarry stability and safety of excavation faces
<b>Responsibilities</b>	Slope stability assessments, geotechnical reports, monitoring
<b>Skills/Qualifications</b>	Geotechnical engineering degree
<b>Environment</b>	Field inspections and office reporting

## ENVIRONMENTAL OFFICER /CONSULTANT

<b>Purpose</b>	Ensures compliance with environmental approvals and monitoring
<b>Responsibilities</b>	Conduct monitoring (dust, water, noise), manage rehabilitation plans
<b>Skills/Qualifications</b>	Environmental science/engineering degree
<b>Environment</b>	Field and office

## SAFETY ADVISOR /CONSULTANT

<b>Purpose</b>	Supports safe work practices and WHS compliance
<b>Responsibilities</b>	Safety audits, incident investigations, training
<b>Skills/Qualifications</b>	WHS qualifications (Cert IV or Diploma)
<b>Environment</b>	On-site and office based



**5.**

**TECHNICAL AND**

**PROFESSIONAL SPECIALISTS**

## PRODUCTION ENGINEER

<b>Purpose</b>	Optimises quarry processing plant efficiency
<b>Responsibilities</b>	Analyse plant performance, troubleshoot bottlenecks, recommend improvements
<b>Skills/Qualifications</b>	Engineering degree (Mechanical/Process/Mining)
<b>Environment</b>	Plant and office

## MINING ENGINEER (QUARRY PLANNING)

<b>Purpose</b>	Designs extraction plans and schedules
<b>Responsibilities</b>	Quarry designs, pit optimisation, mine scheduling
<b>Skills/Qualifications</b>	Mining engineering degree, planning software knowledge
<b>Environment</b>	Office and site inspections

## QUALITY CONTROL TECHNICIAN

<b>Purpose</b>	Ensures quarry products meet specifications
<b>Responsibilities</b>	Sampling, testing, reporting
<b>Skills/Qualifications</b>	Laboratory/materials testing qualification
<b>Environment</b>	Lab and field sampling

## IT / FLEET SYSTEMS SUPPORT OFFICER

<b>Purpose</b>	Maintains quarry technology systems
<b>Responsibilities</b>	Support weighbridge, fleet GPS, and IT systems
<b>Skills/Qualifications</b>	IT qualifications, fleet/dispatch systems experience
<b>Environment</b>	Office with site travel

## CONCLUSION

This job role library outlines the range of positions typically found in a modern quarry operation in Australia, from entry-level traineeships through to senior technical and management roles. It can be used as a foundation for recruitment, workforce planning, training programs, and organisational development.