

Position: **Reference Job #OP01**

Ministry: Transportation and Highways

Working Title: **Rock Scaler**

Branch: Rockwork Division

Level: Range 14

Location: Burnaby

NOC Code: 7621

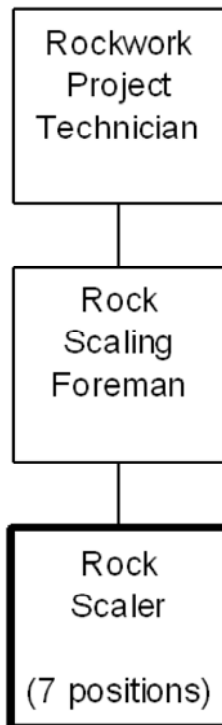
PRIMARY FUNCTION

To scale rock and debris from hazardous rock and scree slopes by hand or with power tools; install rock bolts, dowels, mesh fencing, curtains, blankets and shotcrete for purposes of slope stabilization; conduct or assist with blasting for purposes of excavation of unstable rock masses; assist Engineering staff with assessments of rock slope hazards and with the installation of monitoring systems.

JOB DUTIES AND TASKS

1. Scales loose rock and debris from high rock and scree slopes
 - a. accesses the top of slopes by climbing with pack or by helicopter and establishes anchor point for safety rope
 - b. pries loose rock from slopes using a scaling bar from the top of the slope down using a safety rope and belts
 - c. removes larger rock from slopes using hydraulic jacks or cabling techniques
 - d. identifies, falls and removes small danger trees overhanging slopes and highways
2. Drills and blasts unsafe rock that cannot be removed by manual means
 - a. sets up an appropriate shothole pattern and blast design including any special patterns for wall control
 - b. rigs, sets up and drills shot holes in unstable rock mass employing pluggers, benchers and other rock drills
 - c. loads explosive charges in shot holes using cartridge explosives and electrical detonation and employs sequential delays and other accepted blasting practises to ensure safe and productive blasts
 - d. controls access to blast areas
3. Installs rock bolts and dowels, wire mesh screens and catch fences and applies shotcrete
 - a. rigs, sets up and drills holes in rock for installation of rock bolts or dowels to secure and support unstable rock masses using bencher or jack-leg drill
 - b. installs bolts using epoxy resin cartridges or grout to bond
 - c. tensions and tests rock bolts
 - d. drills holes and installs anchors on rock surfaces for mesh support systems
 - e. installs steel mesh support cables and gabion mesh curtains, blankets and rock catch fences to control falling rock and prevent it from reaching the travelled highway
 - f. directs crane or helicopter for lifting mesh onto the rock slope
 - g. assembles equipment for shotcrete application to support unstable rock masses and protect rock slopes from further weathering and degradation

- h. performs the functions of a nozzleman and potman in shotcrete application
- 4. Assists Engineering staff in the identification of rock slope hazards
 - a. carries out visual examinations of rock slopes including working from ropes if necessary
 - b. maps joint and other surface fractures, traces out the extent and notes any indications of movement
 - c. reports inspection results to engineers
- 5. Assists Engineering staff in surveying and installation of monitoring devices on unstable rock slopes
 - a. places prisms or reflectors on rock slopes
 - b. constructs concrete survey monuments
 - c. installs cross track movement hubs and strain gauges etc.
- 6. Performs other related duties
 - a. maintains and services drilling equipment and maintains safety equipment
 - b. travels away from home to provide rock scaling services
 - c. drives 4x4 vehicle to and from work-sites



FACTOR	REASON FOR CLASSIFICATION	DEGREE	POINTS
1	<p>JOB KNOWLEDGE</p> <p>Understand and apply the accepted methods of rock slope stabilization to remove hazardous rock and stabilize surface conditions on rock slopes above roads and highways.</p>	E	145
2	<p>MENTAL DEMANDS</p> <p>Judgement to assess stabilization requirements and choose an approach using a combination of accepted rock slope stabilization methods and equipment to develop drilling and blasting patterns and sequences.</p>	D	100
3	<p>INTERPERSONAL COMMUNICATION SKILLS</p> <p>Tact required to verify information and answer inquiries related to rock scaling duties and road crew activities with contractors, public and co-workers.</p>	B	20
4	<p>PHYSICAL COORDINATION AND DEXTERITY</p> <p>High level of coordination and dexterity required to work from rigging at cliff face to scale rock.</p>	E	33
5	<p>RESPONSIBILITY FOR WORK ASSIGNMENTS</p> <p>Guided by operational standards, applies accepted work methods in a different way to provide rock slope stabilization services above roads and highways, identify surface fractures, remove unsafe rock and secure rock face.</p>	E	120
6	<p>RESPONSIBILITY FOR FINANCIAL RESOURCES</p> <p>Financial responsibility to requisition supplies or materials.</p>	A	5

FACTOR	REASON FOR CLASSIFICATION	DEGREE	POINTS
7	RESPONSIBILITY FOR PHYSICAL ASSETS/INFORMATION Significant responsibility to rig, set up and operate mobile rock drills on a cliff face.	D	22.5
8	RESPONSIBILITY FOR HUMAN RESOURCES Limited or no responsibility for human resources.	A	5
9	RESPONSIBILITY FOR WELL BEING/SAFETY OF OTHERS Considerable care and attention to provide rock slope stabilization services to ensure safety of the travelling public.	E	40
10	SENSORY EFFORT/MULTIPLE DEMANDS Intense awareness of others to almost always visually and by hearing identify life threatening hazards.	D	18
11	PHYSICAL EFFORT Very heavy physical effort to frequently carry and lift heavy equipment and materials.	F	30
12	SURROUNDINGS Exposure to elements with no shelter almost always.	E	12
13	HAZARDS High level of exposure to hazards from almost always climbing of rock to perform rock scaling.	E	12

Total Points: 562.5

Level: Range 14