

HOLES HIGH PRESSURE GROUTING SCOPE OF WORK 20260711

1. Presentation of the Job:

Kibali underground mine is currently seeking for a local contractor who will be responsible to grout holes (diamond drill holes) that have been drilled previously on the mine.

The grade control (GC) holes present a risk to the mining operations therefore; they should be grouted in a timely manner and as per the SOP where the handling pressure can vary from zero to over 120bars.

The un-grouted holes are presenting three categories of the risks as follow:

- The risk of water ingress or mud rush from one working zone to another,
- The risk of paste leakage when paste filling the stope.
- The risk of riffling rocks

2. Responsibilities:

A. Client

- Provide all scheduled DD holes UG according to the agreed grouting schedule. These will be generated by Hydrogeology engineer.
- Provide the grouting pump and spare parts.
- Manage all cement, valves, and telescopic pipes and casing pipes as required by operational needs.
- Regular inspections & monitoring of QA-QC standards of the work will be done. A check of the quality of execution of tasks produced by Kibali.
- The Client shall ensure that the Contractor's personnel receive adequate training on the operation and use of the grouting pump to enable the proper execution of the assigned work.

B. Contractor

- It is proposed that this agreement will be for 6 months' agreement where all rates apply for the duration of this contract but will be reviewed at the end.
- The rate is per meter, will be provided by contractor and this covers all PPE, diesel, transportation, lifting equipment (IT/Forklift) and the provision of manpower. The contractor will generate the invoice according to the grouted meters and checks coupled with the necessary controls will be done by hydro engineer before signoff by the UG manager.

The following are the expected outcomes for the contractor:

- Complying with the mine safety and environmental standards all the time,
- Act in accordance with the mine operations and shift plan organized by the mine shift supervisor,
- Understanding the instructions given in the plan before proceeding with the grouting underground,
- Preparing the site where grouting will be conducted ahead of starting with the work,
- Identifying the correct location of the drilled holes on site to be grouted and grouting the holes in a timely manner as agreed between the contractor and Kibali and following the SOP in place related to grouting.
- The installation and removal of telescopic pipes and casing, including any associated work, shall be deemed an integral part of the grouting services and shall not be subject to any additional charges under this Contract.
- Acquiring the correct resources needed to complete all related grouting tasks. Such resources include;

- having enough labor to work in both day and night shifts.
- All the required PPE;
- Forklift / IT
- owning the necessary equipment and tooling required such as the correct high-pressure pump (for cement mix) to deliver on the work successfully and safely.
- LV and diesel
- Lifting equipment (Forklift / IT)
- Always maintain client's grouting equipment,

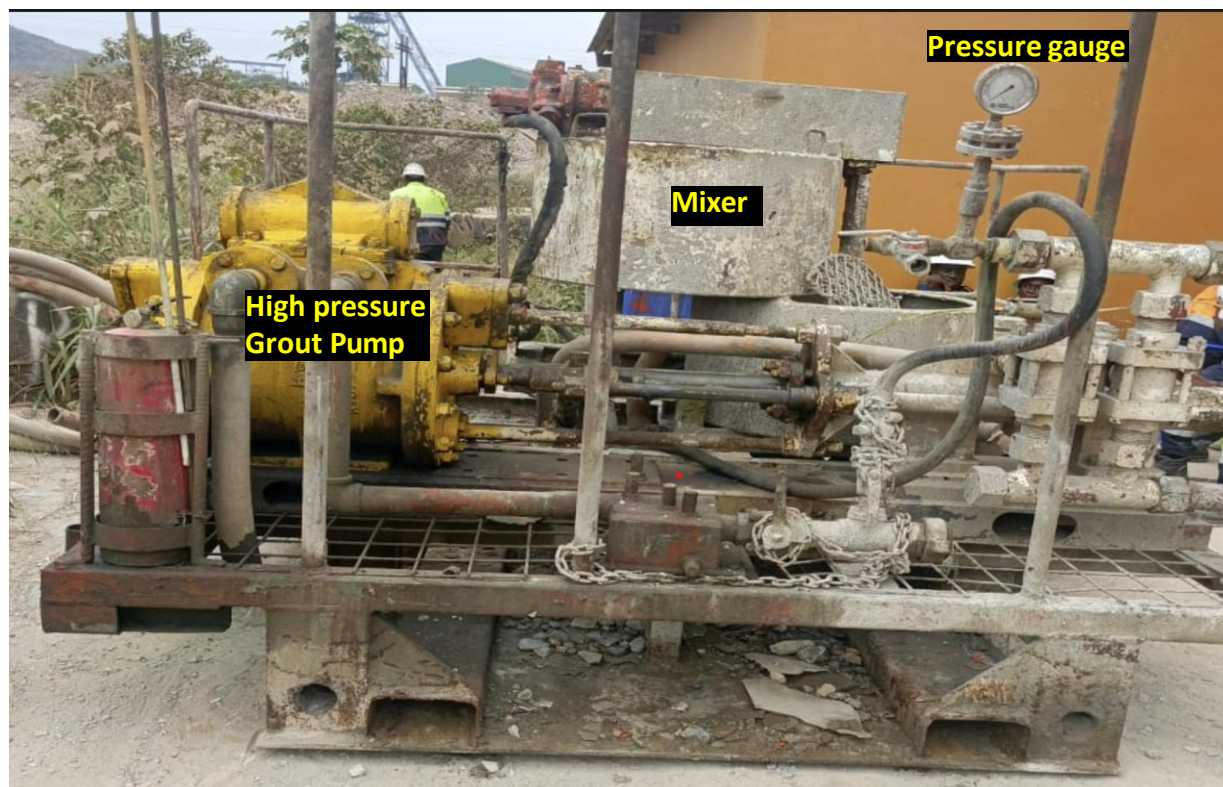
3. Scheduling

- The working schedule will be the same as mine working schedule. There are two shifts per day, and each shift has a duration of 12 hours.
- All the employees from the contractor should comply with the country's labor law.

4. Grouting Equipment and Consumables

The high-pressure grouting pump, the telescopic, valves and all related tools and spare parts for that pump will be provided by KGM.

The contractor owns the LV to transporting personal and cement bags from the store to underground workings and IT (Forklift + Scaffolding) for moving the grouting equipment from site to site.



5. Guideline of holes grouting work specification

Description	Specification
Number of holes (Minimum expected per shift)	3 - 4 holes/shift Depend on the average length of the hole (300m)
Planned meters to be grouted per shift	200-300m/Shift
Planned meters to be grouted per month	6000-7000m/month
Hole diameter (HQ/NQ)	76-96mm
Handling pressure (bar)	0-120bars or more (depend of the depth and angle)

- Grouting jobs will be assigned on a weekly basis based on mining or filling priority. The safe grouting length as per Kibali standard is 60% to 80% of GC holes or targeted blast holes.

- Most of the holes to be grouted will be associated with stopes to be filled or blasted. Each stope will have between 3 and 9 holes to be grouted, and historically average holes per stope is about 7 holes.
- Currently the number of diamond drill rigs underground is 10. Each rig drills 40 meters per day which makes a total of 240 meters of drilled per day. and the grouting must follow the frequency of the drilling schedule to cover the holes.
(Note: *The grouting covered under this contract applies only to the backlog of drilling completed before 2024, and only to drill holes that pass-through stopes provided by the Client*). schedule is therefore targeting priority sites and plugging risky or problem holes.
- Payment will be based on daily rates. The contractor will be required to have personnel reporting to work every day according to Kibali standards (excluding national holidays).
- Some of the grouting will be associated with production slash holes that are linked to previous stope corrections and will be provided by drill and blast department.
- The exploration holes were drilled from the surface and may not be accessible on top. Therefore, grouting of such holes is targeting at areas where the holes are exposed underground. This will be done with pressure grouting pump to push max 50m from the contact point.
- In upwardly inclined holes, consider 2 bars for each 10m of vertical hole depth from the collar going up to estimate the maximum head (Pressure) to reach according to the maximum pressure that the machine can handle.
- This Contract shall remain in effect for a fixed term of six (6) months. The Client may, at its sole discretion, extend the Contract once for an additional period of up to six (6) months, subject to the operational requirements or urgent needs of the mining operations.

6. Grouting holes per month to complete the backlog holes to be grout for this year

Month	Aug26	Sep26	Oct26	Nov26	Dec26	Jan
Backlog grouting	7000	7000	7000	7000	7000	7000
Total	7000	7000	7000	7000	7000	7000

7. Reporting

- The reporting will be done formally on a daily in the production meeting and the report will be sent daily to the underground Hydrogeology management.
- A compiled report to be sent as well in weekly and monthly basis to all involved persons.
- The grouting crew working underground will be expected to report to the shift supervisor on the mine.
- The Contractor shall submit each Grouting Request to the Client for approval and confirmation of the required grouting depths before any grouting activities are undertaken.

8. Responsibility Matrix

Items	Contractor	Client
Cement		X
Grouting Equipment/Pump		X
Grouting equipment maintenance parts	X	
Telescopic pipes, valves		X
LV for underground	X	
Forklift / IT	X	
Fuel	X	
Qualified Supervisors	X	
PPE (Gloves, reflective clothing, safety boots and masks; harness, etc.)	X	

PRE-BID RISK ASSESSMENT FORM

Document Reference:	Revision Number	Original Issue Date	Review Date
BGC-CORP-FORM-002	0	January 20, 2025	January 18, 2030

Project Name: (Reference SOW)	HIGH PRESSURE GROUTING
Project Description:	GC grouting and Installation of Telescopic Pipes – Underground Mine

Tasks	Hazards	Controls
- Travel to workplace : Falling rocks	- Serious injury or fatality	- Conduct workplace inspection, ensure scaling has been completed, verify ground support before entering the area. - FLRA and competent operator
- Workplace inspection: Poor ventilation or hazardous atmosphere	- Asphyxiation, poisoning	- Verify ventilation, conduct gas testing, ensure adequate airflow before commencing work. - FLRA and training on gas testing
- Grout preparation : Cement dust	- Respiratory irritation	- Wear respiratory protection and safety goggles.
- Mixing grout : Splashing grout	- Eye and skin injuries	- Wear respiratory protection and safety PPE.
- Connecting hoses : Hose failure	- High-pressure injuries	- Inspect hoses, couplings, and fittings before use. Replace defective equipment immediately. - Full PPE require
- Pressurising grout system : Hose burst	- Serious injury or fatality	- Ensure pressure does not exceed equipment rating. Barricade the area and keep personnel clear of pressurised lines. Pre use checking.

- Grout injection : High-pressure grout injection	- Injection injury, severe tissue damage	- Never check leaks with hands. Depressurise the system before maintenance. - Training operator and PPE require - Wear safety glasses and face shield; inspect grinding discs; use machine guards. - Wear hearing protection; maintain equipment; limit exposure duration. - Maintain good housekeeping; secure cables and hoses; keep walkways clear. - Use approved scaffolding or work platforms; wear fall arrest systems; inspect access equipment. - Training and competent require - Keep workplace clean and organized; remove waste materials regularly - Click or tap here to enter text.
- Grinding and cutting operations	- Flying particles, eye injuries	
- Noise exposure	- Hearing damage	
- Sprains, fractures	- Slips, trips and falls	
- Working at height on large tanks	- Falls from height	
- Poor housekeeping	- Accidents and injuries	
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Select all the Fatal Risks present:		
 ☒ Stored Energy ☐ Confined Spaces	 ☒ Falling from Heights  ☒ Lifting  ☒ Fall of Ground	 ☒ Blasting and Explosives  ☒ Rotating Equipment  ☒ Hazardous Substances and Chemicals  ☒ Fire

Control Effectiveness:	Checking all equipment condition every start of shift and fill the check list
Additional actions needed before job start:	Attend to the tools box meeting everyday
Identified Risk Level:	☐ Low ☐ Medium ☒ High ☐ Very High

Responsible	Name	Signature	Date
Technical Representative	DIDER TABU		2026/07/13
Safety Representative	 Click or tap here to enter text.		2026/07/13

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Appendix

Risk Ranking matrix:
Compares likelihood of the risk with the consequence level based on the consequence criteria.

*This matrix will be used to evaluate the significance of the risk and its priority for attention.

Likelihood Level				
5	Medium	Medium	High	Very High
4	Low	Medium	High	Very High
3	Low	Medium	High	Very High
2	Low	Medium	Medium	High
1	Low	Low	Medium	High
Consequence Level				
1	1	2	3	4
2	1	2	3	4
3	1	2	3	4
4	1	2	3	4
5	1	2	3	4

Level		Probability	
5	Almost Certain		>90%
4	Likely		50% - 90%
3	Possible		>25% - <50%
2	Unlikely		10% - 25%
1	Very Unlikely		<10%

Likelihood criteria:
Likelihood levels will be chosen from the table below based on the probability that the expected impact selected in from the consequence criteria will be experienced.

Consequence Criteria:
Consequence levels will be chosen from the table below based on the expected impact on Barrick, choosing the worst case of the consequence types that are pertinent. This should reflect the assessment of the existing controls and their effectiveness.

Level	Financial (Operating cash flow)	Shareholder Value (NPV/ Market cap)	Health and Safety	Environment	Society (Community, NGO, Government, Media)	Legal
5	>\$250m	>\$1b	Multiple fatalities or significant loss of quality of life to multiple people.	Severe regional impact resulting in permanent long-term impact to the environment. Immediately reportable to Government or State	Significant loss of trust by affected, national and/or government threatening the continued viability of the operation. International and national government, NGO and media condemnation. Systemic pattern of gross human rights violations affecting multiple people.	Prolonged litigation likely. Potential jail terms and/or high fines for executives and directors. Potential very high fines for the company.
4	>\$100m<\$250m	>\$500m<\$1b	Single fatality or critical injury with a permanent negative impact to quality of life for one person	Significant impact with medium to long-term impairment and residual ecosystem effects. Regulatory agency mandated remediation and/or monitoring over a long-term period to determine extent of adverse environmental impact. Immediately reportable to Government or State.	Community unrest and/or protest requiring intervention and substantial management attention. National and/or regional media coverage over several days and/or NGO condemnation. Individual gross human rights violation or systemic negative human rights impacts.	Prosecution of individuals and/or significant fines for individuals and/or the company.
3	>\$20m<\$100m	>\$50m<\$500m	Serious injury to one or more persons resulting in temporary negative impact to quality of life. (RDI & LTI)	Moderate impact resulting in medium – term impacts to the environment. Remediation completed in compliance with regulations over a medium-term period without any anticipated residual adverse environmental impacts. Potentially reportable to State or government, but not immediately.	Persistent community grievances, complaints, unrest or protests. National and/or regional media coverage and/or NGO scrutiny. Systemic or severe individual negative impacts on human rights.	Significant legislation or permit non-compliance or litigation likely resulting in settlement costs and/or fines.
2	>\$1m<\$20m	>\$10m<\$50m	Reversible injury to one person. (no lost time to work performance) but requiring medical treatment. (MTI)	Localized, minor impact within the current or planned disturbance area (or isolated offsite impacts.) Limited remediation, and/or controls required to meet regulatory standards. Potentially reportable to State or Government but not immediately.	Persistent complaints and grievances, unrest or protests. Local Media coverage. Isolated negative impacts on human rights	Legislation or permit non-compliance or litigation likely resulting in need for legal engagement.
1	<\$1m	<\$10m	Minor injury not affecting work performance and requiring only a single first aid treatment.	Environmental incident with an area already distributed by operations, with short-term impacts. Remediation carried out as part of routine processes. Not reportable to the government.	Minor complaints and grievances from local communities. No impact on human rights.	Minor non-compliance with legislation or permits.

Control Effectiveness: A relative assessment of the degree of modification that is currently present and effective compared with that which is reasonably achievable for a particular risk.	
Descriptor	Guide
Fully Effective	Controls are as good as realistically possible, both well-designed and implemented as well as they can be.
Substantially Effective	Controls are generally well-designed and well implemented but some improvement is possible in their design or implementation.
Partially Effective	Controls are well-designed but are not implemented that well. OR While the implementation is diligent, it is clear that better controls could be devised.
Largely Ineffective	There are significant gaps in the design or in the effective implementation of controls – much more could be done.
Totally Ineffective	Virtually no credible controls relative to what could be done.

Fatal Risk	Critical Controls
Stored Energy	De-energize: Identify sources of energy and ensure they are zero-state
	LOTOTO: Remember to always lock out – tag out – try out
	Guards, Barriers, and Barricades: Ensure they are in position and effective
	Lock-out Device: Use the appropriate lock out device to isolate the energy source
Falling from Heights	Personal Lock and Tag: Have your OWN lock and tag, with unique key
	Rescue Plan: Ensure a rescue plan is in place before starting work above 1.8m.
	Fall Equipment: Inspect and wear the correct fall-restraint or arrest equipment when working above 1.8m.
	Tie Off: Stay 100% tied off at all times on approved anchor points.
Lifting	Elevated Platforms: Only work from certified elevated platforms.
	Barriers: Ensure barriers are in place to prevent people or objects from falling over edge; ensure exclusion zones are demarcated.
	Lift Plan: Determine how the lift will be carried out with input from all persons involved.
	Equipment and Rigging: Ensure all lifting equipment is inspected, certified, and load is secured and controlled.
Blasting & Explosives	Calculate and Confirm: Analyze the weight of the load and all associated equipment parameters.
	Drop Zone: Erect barricades and exclusion zones to restrict access to the area under a suspended load or within a drop zone.
	Communication: Positive communication from a single person to operator.
	Communication: Scheduled and effective blast notification to all site personnel.
Hazardous Substances and Chemicals	Blast Design: Compliance with the approved drill and blast design.
	Transport Equipment: Safely transport explosives using approved, certified, and maintained explosives-transport equipment.
	Exclusion Zones: Establish and restrict access of personnel and equipment to blast exclusion zones with barricades.
	Access Control: Lock out – tag out on stinger and blast tag boards, to ensure all individuals are accounted for.
Confined Space	PPE: Wear correct hazardous-materials PPE in line with Safety Data Sheet (SDS)
	Access: Restrict access to authorized personnel only
	Emergency Response: Containment; and exposure measures must be on hand and working according to SDS guidance
	Detection and Alarm Systems: Correct detection devices and alarms are in place and fully functional.
	Handling and Transfer: Protection protocols are in place when handling and transferring chemicals based on SDS.
	Rescue Plan: Formulate a rescue plan and ensure that a spotter is in place at all times.
	Permit: Ensure you have a signed and complete permit to access entry point.
	Energy Isolation: All possible energy sources have been identified and controlled per lock out – tag out – try out (LOTOTO)
	Access Control: Work area to be demarcated and access control to be managed by a spotter at all entry points.
	Atmosphere: Test and confirm atmosphere is life-sustaining and continue monitoring.

Mobile Equipment	Pre-Use Inspection: Confirm functionality of braking, steering, and safety devices.
	Parking: Follow safe, secure, and stable parking practices in designated parking areas.
	Traffic Management Plan: Adhere to road designs, rules, signage, and segregation of equipment and pedestrians.
	Berms and Windrows: Ensure that berms and windrows are installed to standard and maintained.
	Communication: Ensure positive communication is maintained at all times.
Fall of Ground	Mobile Devices: Do not use phones, smart watches, or tablets when driving.
	Workplace Inspection: Inspected, properly scaled down, and made safe.
	Geotechnical Inspection: Ensure that inspections are completed, and workplaces are continuously monitored.
	Ground Control Management Plan: Ensure that the plan is implemented and communicated.
	Barricading and Exclusion Zones: Ensure exclusion zones have been identified and maintained.
Rotating Equipment	Water Management: Establish a water management plan.
	Guards, Barriers, and Barricades: Ensure these are effective, in place, and maintained.
	Safety Devices: Ensure safety devices and interlocks have been tested and are in working condition.
	Energy Isolation: All possible energy sources have been identified and controlled per lock out – tag out (LOTOTO).
	Combustible Materials Storage: Store combustible/flammable materials separately and safely.
Fire	Ventilation: Ensure adequate ventilation in working areas and that systems are functioning and maintained.
	Fire Detection, Alarm, and Suppression: Ensure fixed and mobile equipment has functional fire detection and suppression system.
	Evacuation Plan: Be prepared and know your emergency plan, egress, refuse chamber, self-rescuer, and muster point.
	Hot Work Permit: Obtain a permit and implement the associated controls before starting work.

GC GROUTING BOQ							
Month	26-Aug	26-Sep	26-Oct	26-Nov	26-Dec	27-Jan	
Backlog grouting	7000	7000	7000	7000	7000	7000	42000
Vol / m	0.00724	0.00724	0.00724	0.00724	0.00724	0.00724	
Volume(m3)	50.68	50.68	50.68	50.68	50.68	50.68	304.08
Unit Pr /m3 (USD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total price / m3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -