

## **Scope of Work for the provision of drilling services**

### **Drilling Requirements for RC, DD, PD and DTH (2018-2020)**

#### **WR1. Project Name**

Reverse Circulation (RC) Drilling, Diamond Drilling (DD), Percussion Drilling (PD) and Down-The-Hole (DTH) Drilling

#### **WR2. Project Commencement Date**

January 2018

#### **WR3. Project Completion Date**

December 2020 or target metres whichever comes first.

#### **WR4. Project Schedule**

On a work request basis between January 2018 to December 2020.

#### **WR5. Scope of Work**

### **SCOPE OF WORK — CONTRACTOR'S ACCOUNTABILITY AND COSTS**

#### **1 General Requirements:**

The drilling contract/umbrella agreement will be for Reverse Circulation (RC) Drilling for resource evaluation and piezometer drilling, Down-The-Hole Drilling for pit wall control drilling and Diamond Drilling for geotechnical requirements as detailed below. In all instances a specific work request will be concluded detailing the expectations and limits of each subset of work. Such work requests may change the timing of the works or reduce scope or transfer scope of works to another area of the pit as allowable by Rössing rules guiding Procurement of services. The guideline of work required under this contract follows in paragraphs 1.1 to 1.5 below:

##### **1.1 Resource Evaluation Drilling: In-pit Reverse Circulation Drilling**

**1.1.1** The contract will include RC Drilling for resource evaluation within the SJ Pit, totalling 20,000 metres (Fifteen- thousand) between 2018 and 2020 at a rate of approximately 2,500 metres/month as set out below. Additional RC drilling meters may however be required over this period.

**1.1.2** Drillholes will generally be either vertical or angled, at -45degrees to -90 degrees with depths ranging from 90 to 300 metres long.

**1.1.3** Where required to do so or where the conditions require, the drilling contractor will supply continuous casing in order to maintain the drillhole integrity while drilling and after drilling. Rates for this work should be supplied and agreed with

the Rössing Representative, the Services Superintendent, with a signed copy representing agreement as to rates.

- 1.1.4** It is important that the service provider understand that their work will be integrated into the Rössing work areas. This means there may be access control limitations for non-drilling personnel in line with national laws and best practice. There may also be equipment movement between work areas to facilitate completion of works in the planned areas or in critical areas. As such, there should be no expectation of being given a standalone work area.
- 1.1.5** Drillholes will be drilled mainly in Alaskite (an abrasive Granite rock) and meta-sediments of the Damara Group, which include, but are not limited to marbles, gneisses, and amphibole schist.

## **1.2 Geotechnical Drilling: Reverse Circulation Drilling for Piezometers**

- 1.2.1** The contract will include 2400 metres (two thousand) of RC Drilling for Piezometer installation between 2018 and 2020 within and along the SJ Pit periphery, at an agreed time. Drillholes will generally either be vertical or angled, at -45 degrees to -90 degrees and up to about 300 metres long, depending on the presence or absence of waste dump material along the SJ Pit periphery.
- 1.2.2** Where required to do so or where the conditions require, the drilling contractor will supply continuous casing in order to maintain the drillhole integrity while drilling and after drilling. Rates for this work should be supplied and agreed with the Rössing Representative, the Services Superintendent, with a signed copy representing agreement as to rates.
- 1.2.3** Drillholes will be drilled mainly in Alaskite (an abrasive Granite rock) and meta-sediments of the Damara Group, which include, but are not limited to marbles, gneisses, and amphibole schist.

## **1.3 Geotechnical Drilling: Diamond or Percussion Drilling (Pit depressurisation)**

- 1.3.1** The contract will include Diamond or Percussion Drilling for depressurisation/dewatering drilling within the SJ Pit, with the potential of totalling approximately 6,000 metres (six thousand) at a rate of approximately 2000 metres/year as set out below:
- 1.3.2** Drill hole diameters ranging from 76mm to 95mm are required if drilling percussion; and where diamond drilling is done and NQ diameter for diamond drilling
- 1.3.3** All drilling to be done in the Pit Area from 2018 to 2020 at an agreed time.
- 1.3.4** Drillholes will generally be horizontal +5 degrees and 90 – 200 metres long.
- 1.3.5** Where required to do so or where the conditions require, the drilling contractor will supply continuous casing in order to maintain the drillhole integrity while drilling and after drilling. Rates for this work should be supplied and agreed with the Rössing Representative, the Services Superintendent, with a signed copy representing agreement as to rates.
- 1.3.6** Drillholes will be drilled mainly in Alaskite (an abrasive Granite rock) and meta-sediments of the Damara Group, which include, but are not limited to marbles, gneisses, and amphibole schist.

## **1.4 Geotechnical Drilling: SJ Pit Diamond Drilling**

- 1.4.1 The contract will include 4,000 metres (four thousand) Diamond Drilling (DD) in SJ pit area). Drilling period and requirements will be confirmed closer to the time during the 3 year contract
- 1.4.2 Drillholes will generally be inclined at -45 degrees to -90 degrees, with a maximum depth ranging from 150 to 450 metres.
- 1.4.3 Where required to do so or where the conditions require, the drilling contractor will supply continuous casing in order to maintain the drillhole integrity while drilling and after drilling. Rates for this work should be supplied and agreed with the Rössing Representative, the Services Superintendent, with a signed copy representing agreement as to rates.
- 1.4.4 Drillholes will be drilled mainly in Alaskite (an abrasive Granite rock) and meta-sediments of the Damara Group, which include, but are not limited to marbles, gneisses, and amphibole schist.

**1.5 Pit Operations Drilling: In-Pit Wall Control Down-The-Hole Drilling**

1.5.1 The contract will include up to 10,000 metres/month (ten thousand) of Down-The-Hole (DTH) drilling for pit wall control drilling, gradually reducing from a total of just over 120,000 metres in 2018 to just above 90,000 metres in 2020. Wall control drilling includes both trim drilling and pre-split drilling, which are all employed to develop smooth, safe and stable final walls. Wall control drilling is planned to ensure delivery of about 2.5 Mt of blasted ground annually, which is about 10% of planned annual mining tonnes. All drilling to be done in the Pit Area for the time period 2018 to 2020.



DTH (165 mm) DRILLING SUMMARY

Period	Operating Days	Fleet Size	Trim Drilling Tonnes	Trim Drilling Metres	Trim Drilling O'Hours	Pre-Split Drilling Metres	Pre-Split Drilling O'Hours	Total DTH Drilling Metres	Total DTH Drilling O'Hours	Rate of Penetration (m/OH)	MA	EU	DTH Metres per Day	DTH Metres per Drillrig
2017	365	2	2 633 479	85 246	4 326	29 976	1 494	115 223	5 807	20	68%	33%	316	57 611
2018	365	2	2 600 064	86 669	4 333	34 668	1 733	121 336	6 067	20	70%	35%	332	60 668
2019	365	2	2 245 196	74 840	3 742	29 936	1 497	104 776	5 239	20	70%	30%	287	52 388
2020	366	2	2 002 189	66 740	3 337	26 696	1 335	93 435	4 672	20	70%	27%	255	46 718

Trim drillholes will generally be vertical and up to 18 metres long, whereas pre-split drillholes will be angled, at -75 degrees to -90 degrees and may extend to a depth of 33m. The contractor should provide a rate as well as well recommendation on the type of drill and bit size that will be utilised during the period of 3 years. Rössing has achieved the following factors listed below, which can be used as a guideline:

	Tonnes per metre	Powder factors (kg/t)	ROP
<b>165 mm trim</b>	33.48	0.465	19
<b>165 mm production</b>	48	0.325	19
<b>311 mm production</b>	120	0.427	18

- 1.5.2** The drilling conditions at Rössing consist of the soft and hard formations each making up 50% of the pit each. The Unconfined Compressive Strength of the soft formation is 90-160 MPa whilst that of the harder formation is 180-220 MPa. The graphic below shows the hard formations (F2, F1) and soft formations (F3).
- 1.5.3** It is important that the service provider understand that their work will be integrated into the Rössing work areas. This means there may be access control limitations for non-drilling personnel in line with national laws and best practice. There may also be equipment movement between work areas to facilitate completion of works in the planned areas or in critical areas. As such, there should be no expectation of being given a standalone work area.

## **2 Supervision and Labour Requirements:**

- 2.1** The contractor is expected to supply the operational supervision and labour to execute the scope of work including:
- 2.1.1** Executing the drilling work and related activities.
  - 2.1.2** Management and execution of Rössing's safety protocols required by or for on-site contractors.
  - 2.1.3** All work permits (costs and applications) for non-Namibian supervisors / labourers.
  - 2.1.4** Provision of operators, artisans and supervisors for the duration of the project.
  - 2.1.5** The provision of all transportation, accommodation and meals for all types of employees and managers for the duration of the project.
- 2.2** **The scope of work must be completed within 3 Years (January 2018 to December 2020).** A new work request will be submitted for each part of the work summarised in section 1 above and subject to the acceptable modifications indicated in paragraph 1. Any additional work requested that is of a similar nature to the work approved for this agreement may be requested when an approved variation agreement is concluded.
- 2.3** The drilling programmes detailed above will be requested by the Superintendent Resource Evaluation, Superintendent Geotechnical and Superintendent Drill and Blast, and are referred to as the RUL Project Managers in this document. Prioritisation of work and scheduling of tasks to be conducted by the designated Mine Engineers or Project Geologists in conjunction with the contractor supervisors.

## **3 Operational Requirements:**

### **3.1 Water Requirements:**

- 3.1.1** RUL will supply water free of charge where required by means of provision of a water supply point on the mine.
- 3.1.2** Contractor will supply water by suitable means of transport to drill sites.
- 3.1.3** For Diamond drilling, contractor is to supply:

- Piping to ensure water reaches the drill platforms and maintain adequate dam facilities for storage as well recycling of water.
  - 4x4 Truck and 5000 litre water bowser for water supply to the drilling platform should the piping not reach such site.
  - Water supply will either be pumped or delivered by Bowser into a 15000 litre Portapool type storage tanks at the highest, safe point and by gravity and or booster pump to 2000 litre mud mixing tanks at the rigs.
  - All water tankers, water pipes and water pumps required to do the work is for the contractors cost and accountability as well as the collection of water from the source (Rössing's existing mine site).
- 3.2** Creating access to collar positions will be RUL responsibility.
- 3.3** The supply of all necessary equipment, including drill rods, bits, core barrels, couplings, springs, water pumps, overshots, survey equipment, non directional wedges, grease, drill fluids, fishing tools, casing, cement, all PPE and safety clothing, all other drilling consumables, etc. will be the contractors responsibility.
- 3.4** For DD Drilling, the contractor is to supply Core boxes and markers. The contractor shall insert these along the core length and mark them legibly with measured drillhole advance as trained by the RUL Project Manager.
- 3.5** For all vehicles used for transportation of equipment and/or tools, which have a gross vehicle mass of up to 3,500kg (3.5t) when loaded, a suitable retarder system must be installed.
- 3.6** Survey tools will be on request by the project manager to contractor considering the lead times for securing such services to site.
- 3.7** The surveying of all drillholes must use a survey tool that has magnetic correction as most rocks in the drill areas are magnetic.
- 3.8** The transportation of all personnel, materials, equipment and tools to and from the drill areas will be the Contractor's responsibility.
- 3.9** It must be accepted that the contractor is working in rough terrain and vehicles for transportation of contractor employees will be expected to be of suitable construction.
- 3.10** Fuel will be at the contractor's cost and may be supplied from Rössing's site pumps in which case the cost of this will be deducted from the monthly invoices.
- 3.11** The Contractor must make suitable arrangements for fuel at Contractor's cost to service their non-permanent on mine fleet.
- 3.12** The Contractor must make suitable arrangements to maintain their drills mechanically and operationally to ensure they meet plan requirements.
- 3.13** Night time lighting of suitable intensity (accepted by RUL) to be provided at contractors cost where required.
- 3.14** Storage of RC and DD samples will be within Rössing's exploration yard. Contractor employees may be called upon to assist with loading/unloading of such samples onto RUL vehicles when collected from the drill sites.
- 3.15** RC and DD samples will be the responsibility of the contractor until handed over to RUL personnel.

- 3.16** The contractor is to ensure the integrity of the DTH blasthole sample cones for sampling by the Geological sampling team.
- 3.17** RUL will provide Office Space, storage and maintenance areas at their core-shed on-site

#### **4 Equipment - Drill rigs**

##### **4.1 RC Drill Rigs**

- 4.1.1** One (1) Truck mounted RC drill rig will be required to operate.
- 4.1.2** Additional rigs may be requested and provided by contractor as per mutual agreement on delivery time frames.
- 4.1.3** RC rigs, self-propelled and self-adjusting and levelling are preferred.
- 4.1.4** All machines must be of a type and large enough to minimise drilling problems such as excessive vibration, stuck drill strings, etc.
- 4.1.5** All RC rigs must be fitted with automatic rod handling capabilities

##### **4.2 DD Drill Rigs**

- 4.2.1** One (1) Truck mounted DD drill rig will be required to operate.
- 4.2.2** Additional rigs may be requested and provided by contractor as per mutual agreement on delivery time frames.
- 4.2.3** The DD drill rig must be of a type and large enough to minimise drilling problems such as excessive vibration, stuck drill strings, etc.
- 4.2.4** The DD drill rig should be self-levelling, in consideration of the fact that some drilling will take place in relatively difficult to access and inclined terrain.
- 4.2.5** All DD rigs must be fitted with automatic rod handling capabilities

##### **4.3 Percussion Drill Rigs**

- 4.3.1** One (1) Truck mounted Percussion drill rig will be required to operate.
- 4.3.2** Additional rigs may be requested and provided by contractor as per mutual agreement on delivery time frames.
- 4.3.3** The Percussion drill rig must be of a type and large enough to minimise drilling problems such as excessive vibration, stuck drill strings, etc.
- 4.3.4** The Percussion drill rig should be self-levelling, in consideration of the fact that some drilling will take place in relatively difficult to access and inclined terrain.
- 4.3.5** The rig should be able to be positioned at minimum distance of at least 5 metres from the highwall being horizontally drilled.

**4.3.6** The Driller's cabin on the Percussion drill rig should be fitted with protective overhead grating for protection against potential rock falls.

**4.3.7** All Percussion rigs must be fitted with automatic rod handling capabilities

#### **4.4 DTH Drill Rigs**

**4.4.1** Up to Three (3) Track mounted DTH drill rig will be required to operate assuming minimum production targets are met.

**4.4.2** Additional rigs may be requested and provided by contractor as per mutual agreement on delivery time frames.

**4.4.3** The DTH drill rigs must be of a type and large enough to minimise drilling problems such as excessive vibration, stuck drill strings, etc.

**4.4.4** The DTH drill rigs must be equipped with sample diverter flaps to ensure drillhole chip samples are not dispensed away from the drillholes

### **5 Productivity**

#### **5.1 RC Drilling**

**5.1.1** Up to 24 hour coverage may be required to be in operation as per request of the RUL Project Manager.

**5.1.2** Night time lighting of suitable intensity (i.e. accepted by RUL as such) to be provided at contractors cost.

#### **5.2 DD Drilling**

**5.2.1** Up to 24 hour coverage may be required to be in operation as per request of the RUL Project Manager.

**5.2.2** Night time lighting of suitable intensity (i.e. accepted by RUL as such) to be provided at contractors cost.

#### **5.3 PD Drilling**

**5.3.1** Up to 24 hour coverage may be required to be in operation as per request of the RUL Project Manager.

**5.3.2** Night time lighting of suitable intensity (i.e. accepted by RUL as such) to be provided at contractors cost.

#### **5.4 DTH Drilling**

**5.4.1** 24 hour coverage will be required to be in operation, as per existing RUL shift patterns.

**5.4.2** Night time lighting of suitable intensity (i.e. accepted by RUL as such) to be provided at contractors cost.

## **6 Tube**

### **6.1 RC Drilling**

**6.1.1** Standard RC (125mm or such other diameter as required by the casing system).

**6.1.2** RUL will provide a sampling unit for one RC Rig. Should additional RC rigs be required, the contractor will be expected to provide a suitable sampling unit per rig.

**6.1.3** The target sample recovery will be 90%. However, measures designed to maximise sample recovery as may be set by the RUL Project Manager must be followed at all times during the execution of this contract.

**6.1.4** If serious drill problems occur the Contractor must be in a position to case and reduce the drillhole diameter in order to allow completion to the required depth.

**6.1.5** Drill rigs must have a dust reduction mechanism to reduce silica dust exposures for employees.

### **6.2 DD Drilling**

**6.2.1** NQ diameter diamond cored boreholes will be drilled. The target core recovery will be 98%. However, measures designed to maximise core recovery as may be set by the RUL Project Manager must be followed at all times during the execution of this contract.

**6.2.2** The target sample recovery will be 90%. However, measures designed to maximise sample recovery as may be set by the RUL Project Manager must be followed at all times during the execution of this contract.

**6.2.3** Drill sizes – HQ/PQ for the start of hole to 12m depth and NQ in standard double tube or triple tube for the remainder of the drillhole depth. If serious drill problems occur the Contractor must be in a position to case and reduce the drillhole diameter in order to allow completion to the required depth.

### **6.3 PD Drilling**

**6.3.1** Drill hole diameters ranging from 76mm to 95mm are required.

**6.3.2** The target sample recovery will be 90%. However, measures designed to maximise sample recovery as may be set by the RUL Project Manager must be followed at all times during the execution of this contract.

### **6.4 DTH Drilling**

**6.4.1** DTH drill rigs should be able to drill holes of 165mm to 203mm diameter



**6.4.2** Drill rigs must have a dust reduction mechanism to reduce silica dust exposures for employees.

## **7 Drill Drillhole Depth**

### **7.1 RC Drillholes**

**7.1.1** RC Drillholes will vary in depth from 90 metres to 300 metres, with inclinations varying between -45 degrees and -90 degrees.

**7.1.2** All drillholes shall be drilled to the depth required by the RUL Project Manager and such depth shall be communicated at the time of collaring the drill drillhole.

**7.1.3** All RC drillholes shall be drilled to their maximum depth as required. Where water is intersected the contractor shall run for a reasonable period to allow the flushing of water and thereafter continue with the drillhole.

### **7.2 DD Drillholes**

**7.2.1** DD Drillholes will vary in depth from 150 metres to 450 metres, with inclinations varying between horizontal, -45 degrees to -90 degrees.

**7.2.2** Pit depressurisation drillholes will generally be horizontal +5 degrees and 90 – 200 metres long

**7.2.3** All drillholes shall be drilled to the depth required by the RUL Project Manager and such depth shall be communicated at the time of collaring the drill drillhole.

**7.2.4** A hole shall be deemed lost if the contractor fails to recover core in the said hole due to a machine or accessory failure and the hole has not reached a minimum of 80% of the drillhole length. Such hole shall be re-drilled at an alternative site pointed out by the RUL Project manager at the contractor's cost to the length that the previous hole was lost. Thereafter, rates for the drilling will be charged at rates as quoted.

### **7.3 PD Drillholes**

**7.3.1** Pit depressurisation drillholes will generally be horizontal +5 degrees and 90 – 200 metres long

**7.3.2** All drillholes shall be drilled to the depth required by the RUL Project Manager and such depth shall be communicated at the time of collaring the drill drillhole.

**7.3.3** A hole shall be deemed lost if the contractor fails to recover core in the said hole due to a machine or accessory failure and the hole has not reached a minimum of 80% of the drillhole length. Such hole shall be re-drilled at an alternative site pointed out by the RUL Project manager at the contractor's cost to the length that the previous hole was lost. Thereafter, rates for the drilling will be charged at rates as quoted.

## **7.4 DTH Drillholes**

- 7.4.1** DTH Drillholes will vary in depth from 17 metres (Trim drilling) to 33 metres Pre-split drilling), with inclinations varying between -75 degrees and -90 degrees.
- 7.4.2** All wall control drillholes shall be drilled to the depth required by the RUL drill pattern designs within drill depth accuracy of 0.3 m. Drillhole positions shall be indicated on the drill pattern map provided to the Drilling Contractor and will be marked on the ground by survey with stakes. All drillholes shall be measured upon completion.
- 7.4.3** All DTH drillholes shall be drilled to their maximum depth as required. All drillholes not drilled accurately (within 0.3 m of the design depth) will be flushed at the cost of the Drilling Contractor. Where water is intersected the contractor shall run for a reasonable period to allow the flushing of water and thereafter continue with the drill hole.
- 7.4.4** Where the required drillhole depths have not been reached, or where drillholes become blocked after drilling, the drilling contractor will be required to redrill holes at the original positions within the parameters of the RUL safe work procedures (SWPs).
- 7.4.5** A maximum amount of redrills may be set as a percentage of total drilling; beyond which redrills will be for the contractor's cost. Contractors must ensure the causes of blasthole blockage are minimised to avoid this situation.

## **8 Drilling penetration rates**

### **8.1 RC Drilling**

- 8.1.1** The contractor is expected to achieve an average of 70 metres per rig per day for RC drilling (as per contractor commitment).
- 8.1.2** If the minimum rate is not achieved on a calendar month basis, the contractor will, at no additional charge to Rössing, either drill over weekends, or supply additional drill rigs at no establishment charge to Rössing to ensure the minimum rates is achieved (penetration rate of 70 metres per rig per day).
- 8.1.3** Any additional services need to be agreed by:
- A representative of the Contractor and the RUL Representative: will negotiate for terms for additional services and once agreed, the information (additional scope of services and prices) needs to be submitted to Procurement, to be added as an addendum to this contract and sent for approval.

### **8.2 DD Drilling**

- 8.2.1** Minimum drill rates of plus 70 metres per day in marbles, and 14 metres per day in pegmatites will be expected
- 8.2.2** Overall an average minimum drilling rate of 80 metres/day is required. If such a minimum rate is not achieved on a calendar month basis, the contractor will, at no additional charge to Rössing, either drill over weekends, or supply additional drill rigs at no establishment charge to Rössing to ensure the minimum rates of 80 metres/per day is achieved.

**8.2.3** Rössing, at its discretion, can convert some of the drill holes from DD to RC. Notification will take place through the RUL Project Manager appointed to direct the contractors work

### **8.3 PD Drilling**

**8.3.1** The contractor is expected to achieve an average of 70 metres per rig per day for RC drilling (as per contractor commitment).

**8.3.2** If the minimum rate is not achieved on a calendar month basis, the contractor will, at no additional charge to Rössing, either drill over weekends, or supply additional drill rigs at no establishment charge to Rössing to ensure the minimum rates is achieved (penetration rate of 70 metres per rig per day).

**8.3.3** Rössing, at its discretion, can convert some of the drill holes from PD to DD. Notification will take place through the RUL Project Manager appointed to direct the contractors work

### **8.4 DTH Drilling**

**8.4.1** Minimum drill rates of 19 metres/hour will be expected.

## **9 Project Management:**

**9.1** The Contractor is expected to Supply a detailed bar-chart showing the timeline for the duration of the project. The contractor must make all efforts to liaise and co-ordinate with RUL all requirements to ensure a smooth interface between all work activities and related stakeholders.

**9.2** Conduct a risk assessment during site establishment and throughout the drilling project.

**9.3** Formulation of safe work procedures associated with drilling in the open pit and all associated activities.

## **10 Special Clauses**

**10.1** Rössing, at its sole discretion, will review the technical and potential economic results of drilling as it proceeds, this could result in the following scenarios:

**10.1.1** It may occur that additional drilling, in excess of the metres noted above may be required during the contract period. The additional drilling will be conducted on the same commercial terms and legal conditions as the required volumes indicated in this contract.

**10.1.2** All changed rates shall be lodged as an addendum to the official set of documents for this contract for reference and will signed by both parties as proof of the agreement to pay for services at the indicated rates.

**10.1.3** In the event where the minimum drilling rates stated in section 8 are not achieved over a continuous period of two months, due to factors relating to poor availabilities of Contractor's drilling equipment, RUL is to impose penalties for loss of drilling production and loss of available spaces.

**10.1.4** In the alternative, it may occur that the performance of the contractor is continuously insufficient for the targets of Rössing to be met. This failure to perform and any feedback from remedial actions may be referenced in contract cancellation discussions and decisions.

**10.1.5** Due to WC and RC drilling spaces being dependent on the production plan, and production activities having precedence over RC drilling activities, there may be intermittent periods during which no WC or RC drilling areas are available. In such events, the RUL Project Manager will give the Contractor a minimum two-week notice regarding the lack of drilling space, and no charges will apply.

SAFETY, HEALTH & ENVIRONMENT	
<p><b>Service Provider’s Responsibilities</b></p> <ol style="list-style-type: none"> <li>1. Required to complete the Contractor Management Documentation.</li> <li>2. Complete and submit a risk management plan for identified risk areas.</li> <li>3. Comply with the Rössing, Rio Tinto and Namibian Safety Standards.</li> <li>4. <b>Lockout facilities</b> at points where isolation locks can be fitted to control the various forms of energies.</li> <li>5. <b>Emergency stop</b> buttons must be fitted on all equipment.</li> <li>6. <b>Working at Height and Fall Prevention/Protection:</b> Adequate platforms fitted with handrails and kick plates must be provided where possible. Where this is not possible certified anchorage points must be provided where a full-body harness and fall arrest system can be attached. Harnesses and fall arrest systems must be of certified design and kept in good condition.</li> <li>7. <b>Confined Space:</b> All confined spaces are to be identified and labelled – “No entry” (labels for these areas can be obtained from the RUL Safety Section). Entry into such confined spaces may only take place once confined entry procedures have been followed as per the RUL/Rio Tinto standard C5</li> <li>8. A <b>Green</b> Rotating light must be fitted to all vehicles (except haul trucks and excavators) that travel in the operational/mining area after the hours of sunlight.</li> <li>9. Mobile equipment must have clear <b>identification</b> that is clearly visible to other equipment travelling in the vicinity.</li> <li>10. All operator cabs must be <b>air-conditioned</b>.</li> <li>11. <b>Fire extinguishing equipment</b> must be fitted to all mining equipment. All vehicles must have portable fire extinguishers as a minimum standard. The Service Provider</li> </ol>	<p><b>Rössing Retained Responsibilities</b></p> <ol style="list-style-type: none"> <li>1. Identify and rate risk areas and make available to Service Provider.</li> <li>2. Carry out environmental assessments in the Work area and communicate outcomes of audit findings for correction and record purposes.</li> <li>3. Provide “No-Entry” labels by the Rössing Safety Section.</li> </ol>

<p>is responsible to keep these in a serviceable condition at all times.</p> <p>12. <b>Guarding</b> must be fitted over all moveable parts to prevent accidental contact with moving machinery. The suitability of the guarding must be discussed with the Rössing Project Manager prior to equipment being commissioned on the RUL site.</p> <p>13. Supply all necessary personal protective equipment (<b>PPE</b>) that may be required.</p> <p>14. Ensure that the whole operation and maintenance workshops adhere to ISO 14001 Standards.</p> <p>15. Supply an adequate lighting to ensure adequate visibility during night operation.</p>	
<b>GENERAL</b>	
<p><b>Service Provider's Responsibilities</b></p> <ol style="list-style-type: none"> <li>1. Conduct a site visit to gain familiarity with all project details, OHSE (Occupational Health, Safety and Environmental) site standards and to clear any technical issues with the RUL Project Manager.</li> <li>2. Supply of a detailed bar chart (Gantt Chart) showing the timelines, milestones and any other activities that will be performed for the duration of the project. The Service Provider must make all efforts to liaise and co-ordinate with RUL responsible personnel to ensure a smooth interface between all work activities</li> <li>3. Provide organograms of the key staff complement to be involved in the project specifying names and titles to the Company, <b>prior</b> to the commencement of the Work.</li> <li>4. Provide an HSE officer for the site and a safety representative per shift who is to be available on site at all times. In cases where the latter is not available, a deputy representative is to be available to assume the duties of the safety representative.</li> <li>5. Work may be required to proceed on a 24 hour 7 day per week basis. The Service Provider is required to specify the proposed shift pattern which must comply with Namibian legislation and minimise operator fatigue.</li> <li>6. Comply with the Namibia legislation pertaining to the employment labour and make every effort to employ local Namibians where possible.</li> <li>7. Supply supervision, specialised skills and any other labour to execute the project safely, cost effectively and efficiently. Work permits for non-Namibian workers must be organised by the Service Provider.</li> </ol>	<p><b>Rössing Retained Responsibilities</b></p> <ol style="list-style-type: none"> <li>1. Designate change house facilities for Service Provider personnel; Service Provider personnel movements will be restricted to these facilities only. Service Provider personnel must ensure that these facilities are maintained to Rössing housekeeping standards. Normal wear and tear maintenance will be for Rössing's account while any damage will be for the Service Provider's account.</li> <li>2. Water and electricity for change house will be supplied free of charge by Rössing.</li> <li>3. Provide a cleaning service for working overalls.</li> </ol>

<ol style="list-style-type: none"> <li>8. Transport all personnel, materials, equipment and tools to and from the Mine site.</li> <li>9. Provide accommodation to all Service Provider personnel for the duration of the project.</li> <li>10. Provide fuel for supporting vehicles that regularly move on and off the Rössing Mine site.</li> </ol>	
<b>DRILLING OPERATIONS</b>	
<p><b>Service Provider's Responsibilities</b></p> <ol style="list-style-type: none"> <li>1. Use suitable drill rigs compliant with RUL requirements.</li> <li>2. Use suitable auxiliary equipment that can safely perform the work. Safety features including retarders are essential on Heavy mobile equipment.</li> <li>3. Ensure drilling areas are kept clean and functional at all times.</li> <li>4. To provide a detailed maintenance plan for the rigs prior to commencement of drilling.</li> </ol>	
<b>MAINTENANCE</b>	
<p><b>Service Provider's Responsibilities</b></p> <ol style="list-style-type: none"> <li>1. Supply all ancillary equipment to safely perform the complete scope of work e.g. loaders,</li> <li>2. All repairs, spares and maintenance of Service Provider's equipment, including the complete process of safe tyre handling.</li> <li>3. Provide suitably qualified maintainers with mechanical and auto-electrician's qualifications.</li> </ol> <p><b>Service Provider's Responsibilities</b></p> <ol style="list-style-type: none"> <li>1. Rössing's Sampling unit (Sandvik Cyclone) to be maintained by an artisans with both mechanical and auto-electrician background.</li> </ol> <p>The service provider will be responsible for sampling cyclone's:</p> <ul style="list-style-type: none"> <li>• Good working state</li> <li>• Daily checks, monitoring and regular service</li> <li>• Correct usage and report of wear and tear</li> <li>• Cleaning and housekeeping</li> <li>• Supply and repairs of high wear and tear parts (i.e. clamps, fuses, rubber seals, gaskets, hinges, nuts &amp; bolts, seal kits, lubrication, welding etc.)</li> <li>• Damage induced by non-compliance or misuse. This will be guided by OEM's parts replacement schedule and investigations.</li> </ul>	<p><b>Rössing Retained Responsibilities</b></p> <ol style="list-style-type: none"> <li>1. Designated workshop site for equipment maintenance. Service Provider must ensure that these facilities are maintained to Rössing housekeeping standards. Normal wear and tear maintenance will be for Rössing's account while any damage will be for the Service Provider's account. Water, electricity and compressed air will be supplied free of charge in these facilities.</li> <li>2. Supply a water point for the supply of non-potable water for dust suppression.</li> </ol>

<ul style="list-style-type: none"> <li>• Labour for replacement of new parts</li> </ul> <p>RUL will be responsible for cyclone's:</p> <ul style="list-style-type: none"> <li>• Major parts cost and procurement (i.e. dust reduction filters, wheels, motors etc.) based on the OEM's parts replacement schedule.</li> <li>• Major component overhaul/repairs every three to five (3-5) years (i.e. filters and tiles replacement, sample hose nipple, internal lining, etc.)</li> <li>• Monthly inspections with contractor maintainer.</li> <li>• All cyclone breakdowns, repairs and other delays should be communicated to RUL representatives and recorded in the daily drilling reports.</li> </ul>	
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**WR6. Battery Limits**

**Not Applicable**

**WR7. Payment Arrangements**

Prices will be fixed for the first twelve (12) months of the agreement. Prices may be reviewed after each twelve (12) month period subject to 90% of the overall average Namibian Consumer Price Index (NCPI).

**WR9. Reports**

Daily reports are to be furnished upon the appointed Project Geologist and Mine Engineers, every morning for acceptance and checking. Monthly invoice will be based on the items in the daily report. This will greatly aid the invoice vetting process for the monthly payment and the contractor is encouraged to make use of this system to reduce delays in payments.