

Malteser International Europe · 51103 Cologne · Germany

**Country Coordination Office
Plot No: 445 Kololo Road 3k South
Tong Ping, Juba Town
South Sudan**

Juba, 15 December 2018

**INVITATION TO BID
MI/ITB/WAU/2018/0445**

FOR DRILLING OF 4 BOREHOLES IN RAJA COUNTY/LOL STATE

This is an Invitation to Bids for the above mentioned supply. Please find enclosed the following documents, which constitute the bid dossier:

- A. Annex 1: Specification of Bidding
- B. Annex 2: Bill of Quantity

The whole Specification for bidding dossier (digital version) can be down loaded here on the South Sudan NGO Forum's website.

We look forward to receiving your bids by or before the **submission deadline on 28.12.2018 at before: 4:00 PM** at the addresses specified in the documents.

Thank you for your cooperation.

Sincerely Yours,

Name:

Nermin Silajdzic
Country Logistics and Security Manager
Juba, Wau
South Sudan
Tel: +211 924 767 949
Tel: +211 911 746 963

Sign:



A. SPECIFICATION OF BIDDING

Related to our advertised Invitation to Bid MI/ITB/WAU/2018/0445 Malteser International herewith calls for bids concerning drilling of four boreholes in Raja County in South Sudan. Under the following reference number:

Donor project number: WAU-1318

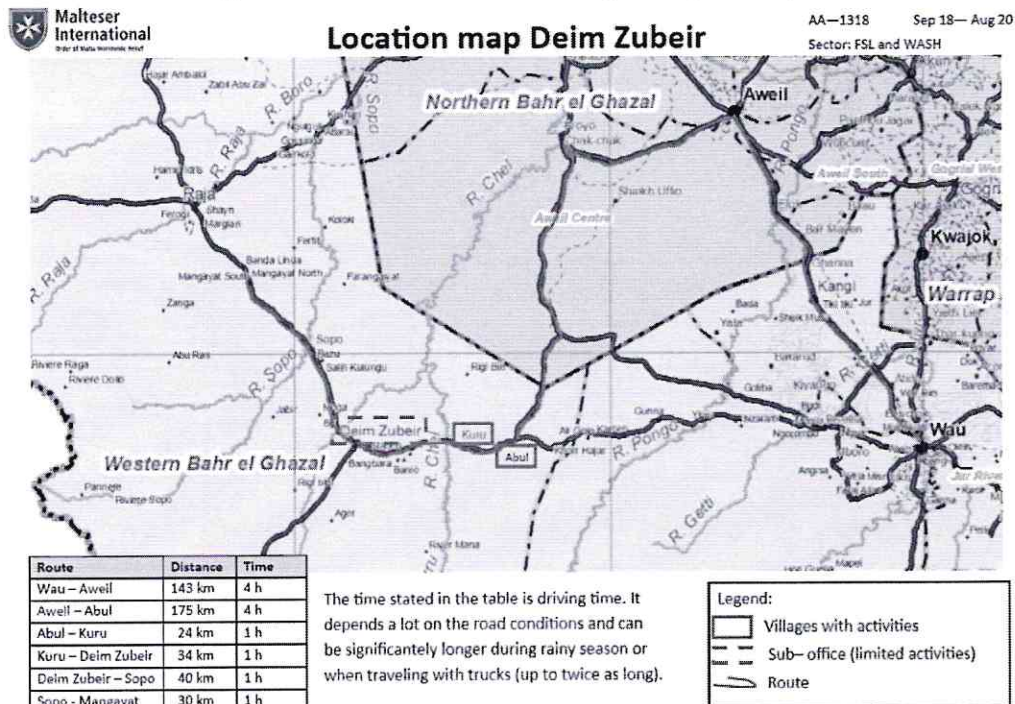
Malteser International project number: 1318

1. Description of the organization and its activities

Malteser International is a worldwide humanitarian relief service of the Sovereign Order of Malta and legally a division of Malteser Hilfsdienst e. V. based in Cologne, Germany. Malteser International is a charitable organization recognize as a relief organization according to the Geneva Convention. In South Sudan, Malteser International is running basic health care programs, a sleeping sickness control program and supporting people affected by leprosy. The activities implemented in Wau are focusing on food security and livelihood and WASH.

Objective of Call for Bids: In accordance with the overall targets of above mentioned operations, Malteser International plans to procure

Drilling of 4 boreholes in Lol state: the project consists of the construction of two boreholes in each of the two villages Kuru and Abul in Lol state (see map below).



The technical specifications and conditions of the bidding process are described below and in the Annexes which are part of this Invitation to Bids.

Suppliers are invited to present an offer complying with the requirements here below specified.

2. Offer Presentation

The offer shall be delivered in a sealed envelope to Malteser International's Office Hai Daraja, Block 21, Plot No. 183, Western Bahr El Ghazal, Wau, South Sudan or to Juba Country Coordination Office Plot No: 445 Kololo Road 3k South, Tong Ping, Juba Town.

The deadline for the delivery of the offer is: 28.11.2018 before: 4:00 PM

- The offer shall be written in English
- The envelope must state the following information:
 - Reference to the Bid Number
 - Address to which the offer is being submitted (see above)
 - The words *“Not to be opened before deadline”* written in English
- The offer should be valid for **30 days after the deadline**
- The format BoQ can be used or a separate one depending on supplier’s choice.

3. General conditions

- The offer shall be typed or written and signed on each page by the legal representative of the supplier,
- The winning supplier might be requested to provide catalogues, pictures, technical descriptions and/or samples of items at the order stage when required,
- The prices of the offer will be expressed in United States Dollars. The prices must be on unit price basis as well as by totals,
- The prices will be considered fixed whereas Malteser International will not process Tax exemption. No additional change of whatsoever nature and type will be accepted by Malteser International,
- Malteser International reserves the right to accept or reject all quotations depending on prevailing condition at the time.

4. Technical specification

All construction materials shall be provided by the contractor to carry out these construction activities. The contractor is expected to handle supplied materials with care to avoid loss of material on site and to carry out the works professionally without any material wastage

4.1. Mobilization

The contractor shall make his/her own arrangements for food, accommodation and storage facilities on ground. Further he/she shall provide all plant and equipment and share a list of his/her equipment including drilling plant and tools as part of the bid document. The Contractor shall nominate one key person who shall be responsible for the assignment on behalf of the Contractor and shall be the Contractor’s site representative. This person is indicated on the list of personnel which is part of the bid document (see annexes).

The Contractor shall arrange for transportation and security of all equipment and staff. He/she shall take all necessary precautions to ensure the security and safety of works, materials, equipment and people associated with the works. MI shall liaise with the local authorities to ensure that the roads/sites are accessible by the Contractor in order for him/her to execute the works in record time.

4.2. Siting of boreholes

The contractor shall be responsible to carry out geophysical surveys using VES (Vertical Electrical Depth Sounding) on the sites located for drilling. He/she shall thus have competent staff, equipment and software for carrying out the surveys and interpreting the data. The rough location of the boreholes has been assessed by MI staff and community representatives. The contractor will be required to locate at least three probable sites for each borehole and

number them in order of priority. The final site selection is made in coordination between contractor's staff, MI staff and the community. A hydrogeological report will be submitted to MI.

4.3. **Drilling**

The contractor shall be responsible to for selecting the appropriate drilling procedure for the geology of each drilling site. The diameter must be adequate to accommodate the final borehole casing diameter plus a minimum annular space of 50 mm. The contractor may choose to either drill a hole of adequate diameter on the first pass or to drill a small diameter test hole, then ream to the desired size. Regardless of the procedure, payment shall only be for the drilled hole at the appropriate size.

The drilling method, drilling plant, drilling fluid and fluid additives are subject to approval and should be mentioned in the bid document. The drilling fluid and additives must be non-toxic and biodegradable. Its supply is a responsibility of the contractor.

Drill cuttings shall be placed in containers provided by the contractor. At each drill site, the contractor shall have sufficient sample container to accommodate all of the samples collected. The samples shall be kept available for inspection until the supervisor gives permission to dispose them.

During the drilling, completion and development of each borehole, the contractor shall maintain a detailed driller's report. The report shall give a complete description of all formations encountered, number of meters drilled, number of hours spent drilling, shutdown due to breakdown, length and type of casing and screen set, and other pertinent data as requested by the supervisor. The format of the report shall be approved by the supervisor previously and shall be signed by both the driller and the supervisor on a daily basis. In addition, the contractor shall measure and monitor the depth of the borehole in progress, the static water/mud level in the borehole, the different depths of water strikes and aquifers and the penetration rates at various strata or change of tools.

The contractor shall be paid unit prices per metre in accordance with the depth drilled. The depth given in the Bill of Quantity are indicatives only and the unit prices per meter shall include all costs associated with the drilling e.g. drilling additives, preparation of daily drilling reports.

4.4. **Borehole construction**

The final depth of the borehole and the other relevant depths involved in the design of the borehole shall be determined from measurements made by the contractor and the supervisor. The design of the borehole (intervals to be cased and screened, screen slot opening, etc.) are to be approved by the supervisor.

The gravel pack should consist of well graded river gravel. Under no condition should rock chippings be used. The material should be free of shale, mica, clay, dirt or organic impurities of any kind. The material should be carefully introduced into the hole to avoid bridging. The last 6 meters of annular space shall be filled with cement grout to provide a sanitary seal after the development of the borehole.

4.5. Borehole development

The contractor shall develop the borehole by a combination of jetting with water and surging with air. The borehole shall be developed with great care to avoid any damage to the casings and screens. The development shall continue until the borehole is judged to be free of sand by the supervisor.

4.6. Pump testing

The contractor shall conduct a pumping test on every successful borehole. As the 4 boreholes will be fitted with hand pumps, the test shall be at a constant yield and continuous pumping of 1m³/h for a period of 6 hours. Immediately after the pumping, the contractor shall measure the water-level recovery in the borehole over a minimum period of 1 hour, unless the water level has recovered to the original level before. During both the pumping and the recovery periods, the contractor shall measure the water level in the borehole using a calibrated electronic sensing device. The water level measurements are to be taken in accordance to the schedule indicated by the supervisor. The contractor shall analyse the results of the pumping test and report the results on forms provided by the supervisor.

4.7. Water quality analysis

During the pumping test, the contractor shall collect water samples from the borehole for water quality analysis. The samples shall be collected from the pump flow direct into the container. The containers shall be labelled with the borehole number, date and time of sampling. The information shall be entered into a form provided by the supervisor.

The contractor shall have tests carried out in a laboratory approved by the supervisor to determine the following parameters: colour, odour, taste, electrical conductivity, pH, turbidity, temperature, manganese, total hardness, Iron, chloride, fluoride, arsenic, nitrate and sulphate. Microbial parameters shall comprise faecal coliform counts.

4.8. Borehole disinfection

After completion of the pumping tests the contractor shall undertake final disinfection of the borehole with a hypochlorite calcium solution with a concentration of 50mg/L of free chlorine. The chlorine shall be applied uniformly throughout the entire depth of the water in the borehole. All accessible portions of the borehole above the water shall also be wetted with a chlorine solution.

4.9. Construction of concrete pad

The Contractor shall construct a concrete pad around the borehole casing sticking above the ground (around 30cm) and continuous with the underlying 6 m cement grout in the sanitary seal. The pad shall be 2m in diameter. The concrete shall be cast over a layer of compacted hard core with a minimum thickness 200 mm above the ground and continuous with the underlying cement grout. The drainage channel shall be at least 6 m long, sloping away from the pad. The Contractor shall ensure that the sides of the pad are straight by properly anchoring the forms. The top of the pad shall be trowelled to a smooth surface. The contractor shall keep the surface of the concrete pad moist for a period of 72 hours after the concrete has been placed.

4.10. Installation of Indian Mark II hand pump

Prior to leaving a borehole unattended at any time, the contractor shall place a temporary cap on the borehole casing. An Indian Mark II hand pump shall be installed at each borehole. All necessary parts and tools for the installation are provided by the contractor.

5. Timetable

	DATE	TIME*
Deadline for submission of offers	28 Dec 2018	04:30 p.m.
Opening of submitted offers	2 Jan 2019	04:00 p.m.
Notification of award to the successful contractor	7 Jan 2019	-
Signature of service contract	7 Jan 2019	-

* All times are local time in Wau and Juba, South Sudan

6. Validity of quotations

Each company is bound to the bid submitted for a period of 30 days from the deadline for submission of quotations.

7. Language of quotations

All quotations, official correspondence between companies and Malteser International, as well as all documents associated with the quotation request will be in English.

8. Submission of quotations

All quotations must conform to the following conditions:

- 8.1. Each quotation must have arrived at the address stated below within the deadline on 28 Dec 2018, 04:00 p.m. (local time).

Malteser International Wau – South Sudan
Hai Daraja – Wau near to ICRC office
Wau State/Western Bahr el Ghazal State, South Sudan

And/or

Malteser International - Country Coordination Office
Plot No: 445 Kololo Road 3k South
Tong Ping, Juba Town, South Sudan

- 8.2. Each quotation, its annexes, and all supporting documents (specified in point 9) must be placed in a sealed envelope that is marked with the following only:
 - a) the above-mentioned address;
 - b) the reference code of the bid;
 - c) the instruction "Do not open before comparative bid analysis";
 - d) The name of the bidder.

Technical and financial bids must be placed in a sealed envelope.

9. Content of bid

All submitted bids must conform to the requirements mentioned in the request for quotation. Furthermore, they must include the following documents:

Part 1 - Quotation: A quotation for the offered service. The format BoQ can be used or a separate one depending on supplier's choice. Additional sheets may be attached for further details.

Part 2 - Legal documents

- Copy of the company's certificate of incorporation,
- Copy of Chamber of Commerce registration,
- Copy Tax Identification Certificate,
- Copy of Certificate of Operation,
- Company's Financial Statement of last three months,
- Company's official address,
- Bank account details (where money would be paid),

Part 3 - Technical resources and experience

- Copy of drilling license,
- Proposed work program for the drilling of the 4 boreholes,
- List of technical personnel,
- List of equipment,
- Projects undertaken either copies of work completion certificates of at least 2 previous work of similar nature executed in South Sudan and/ or filled list with contact details

(You may use the attached templates)

10. Ownership of bids

MI reserves/funds ownership of all bids received. As a consequence, bidders will not be able to stipulate requirements that their bids are to be returned.

11. Opening of submitted bids

The bids will be opened on 2 January at 4:00pm in Malteser International Country Coordination Office in Juba, South Sudan, by the Procurement committee. The selection process will be recorded in writing by the committee.

12. Bid evaluation

The criteria applied for the evaluation will be the legal conformity, the price, the technical experiences, the compliance with technical specifications and quality standards, and the ability to deliver and meet timeframes as specified. The work will be awarded to the winning bidder according to the timetable mentioned above.

13. Service requirements

The vendor has to guarantee the price quoted will remain unvaried for the whole duration of the contract.

14. Terms of payment

1. Malteser International shall make stage payments after completion of works per stage agreed according to bills/invoices of materials and labour. MI's supervisor will verify the stage completed works and, if satisfied, issue a certificate of practical completion for each stage before payment is effected for that completed stage.
2. MI will withhold a retention fee of 10 % of the invoice paid until 6 months elapses to allow the observation for any defects in works. In case defects are observed in this



period, the contractor will be required to make them good before the retention fee can be paid out.

3. All payments shall be done to the contractor's account in US Dollars
4. Submission of invoices is contingent on the issuance of a final certificate of practical completion prepared by MI's supervisor at the field level
5. Final Payment of cumulative 90% shall be made after submission of works completion report by the contractor, the final invoice and final certificate of practical completion
6. Payment of the retention fees is done after no defects certificate is issued by MI's supervisor after a joint site verification visit with the community

15.1 Proposed Bill of Quantity for Borehole drilling

The quantities stated against each item of the Bill of Quantities (BOQ) are the estimated quantities and are therefore provisional. The contractor shall be paid for actual quantities used.

S/N	Description	Unit	Qty	Unit price USD	Amount USD
1. Preliminary and general					
1.1	Mobilization of personnel, equipment and materials	lump sum	1		
1.2	Geo physical survey Perform VES ground water survey and determine most potential and appropriate location for high yield borehole. The survey must be conducted by an experienced Hydrogeologist consultant /expert. Including preparation and submission of hydrogeological report	lump sum per BH	4		
Subtotal 1. Preliminary and general					
2. Borehole construction					
2.1	Drilling to a maximal depth of 90m Note: depth depending on geo physical survey (most boreholes in the area are 45-50m deep and the water intake is at around 30m depth)	m of drilling overburden	200		
		m of drilling rock	160		
2.2	Sampling and storage of drill cuttings at 2m intervals or as instructed by Engineer	lump sum per BH	4		
2.3	Supply and installation of UPVC casings (5"ND) 3M long x 170mm (5") external diameter with a minimum thickness of 3mm including end cap (average of 80m minus the length of the screen)	# pipes	84		
2.4	Supply and installation of UPVC screens (5"ND) 3M long x 170mm (5") external diameter with a minimum thickness of 3mm (average of 18m per BH)	# pipes	24		



2.5	Supply and installation of gravel pack with uniform grading between 2.5 and 4.0 mm diameter from clean river gravel (5m ³ per BH)	m ³	20		
2.6	Well developed during a minimum of 6 hours until a stabilized satisfactory yield is reached and the turbidity is less than 5 NTU clear water according to technical specifications	hrs	24		
2.7	Supply and installation of cement grouting of 1m diameter and 4m depth below the ground level, with all required activities, around the casing to act as sanitary seal (1m ³ per BH)	m ³	4		
Subtotal 2. Borehole construction					
3. Test pumping					
3.1	Perform a minimum of 6 hours constant rate test and recovery data are to be reported on standard borehole log. At least a yield of 5000ltrs/h is realized as per installation	lump sum per BH	4		
Subtotal 3. Test pumping					
4. Water quality analysis					
4.1	Water sampling, physical test, bacteriological and chemical test analysis, Original copies of results of the Water quality testing, showing date of sampling and date of analysis must be availed by contractor prior to payment for drilled borehole. The analysis to be checked against GOSS and WHO standards, and levels to be permissible before further construction.	lump sum per BH	4		
4.2	Clean and disinfect the borehole with B23 50mg/liter with all required related activities.	lump sum per BH	4		
Subtotal 4. Water quality analysis					
5. Hand pump installation					
5.1	Supply and installation of pedestal, water tank, pump head assembly and cylinder	set	4		
5.2	Supply and installation of India Mark II raiser pipes with sockets and connecting rods (according to water level and pump test; average of 12 pipes)	set	48		
Subtotal 5. Hand pump installation					
6. Head work					
6.1	Reinforced Concrete construction of apron (diameter 2m, raised 30cm to allow proper drainage) and installation of the hand pump pedestal & third plate, to cover the borehole. Construction of a drainage channel (6m long). Keep moist for at least 72 hours.	pc	4		

6.2	Excavation and construction of soak away pit (2m deep) filled up with stones	pc	4		
6.3	Cleaning the working site and removing all of the unnecessary items	sites	4		
6.4	completion reports	sites	4		
Subtotal 6. Head work					
TOTAL					

Note: Grand total should include for all costs associated with the drilling works including but not limited to company overhead, labor, materials, transport and 10% withholding tax on services. Contractors are advised to familiarize themselves with the site location in order that they may know the cost of transport.

15. Annexes

- 15.1. Proposed bill of Quantity BoQ
- 15.2. Proposed work plan
- 15.3. List of technical personnel
- 15.4. List of equipment
- 15.5. Experience

On behalf of Malteser International:

Date: 15 December 2018

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