



OIL & GAS DEVELOPMENT COMPANY LIMITED

Request For Quotation (Imports)

OGDCL House , Jinnah Avenue, Islamabad, Pakistan

ANNEXURE 'A':

Description: 1500 NO. SUBMERSIBLE GEOPHONE STRINGS
Tender Enquiry No: OGDCL-SCM-FD-CB/ECMP-6200000049/2022
Delivery Period: 90 DAYS
Mode of Shipment: CFR KARACHI
Mode of Procurement: PRESS TENDER
Evaluation Criteria: FULL CONSIGNMENT WISE
Bid Bond Value: USD 5,100/- VALID FOR 210 DAYS
Bid Validity: 180 DAYS FROM TECHNICAL BID OPENING
Bidding Procedure: SINGLE STAGE TWO ENVELOPE
Purchase Req: 20000274
Other Terms & Conditions: Attached

SR NO	Material No	Material Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price (CFR)	Total Price (CFR)	Deviation from Tender Spec. If Any
1.	55-02837	SUBMERSIBLE GEOPHONE STRINGS	NO	1,500					
2.	55-02836	DEPLOYMENT ROD ADJUSTABLE LENGTH 15-METER	SET	15					

SAP attachment for Procurement of 'Submersible Geophone Strings'

Sr. #	Description	SAP No.	Quantity	UoM																																				
1.	<p><u>Submersible geophone strings</u> Submersible Geophone Strings, housed in water proof casing, to be used in deep water up to 15 meters' depth in lakes, ponds, water logged area etc. to acquire good quality 2D & 3D seismic data.</p> <p><u>i. Geophone elements Configuration.</u> 12 Nos. Geophone Elements (coils) with resistive damping connected in two parallel groups, each group has 06 Nos. elements connected in series (06 Series x 2 parallel) with +ve to male pin as per SEG standard.</p> <p><u>ii. Geophone String Housing</u> Geophone String housed in a heavy duty, rugged, durable and water proof / sealed and rust/corrosion proof complete non-magnetic metal (austenitic stainless steel or Aluminum) case, in round shape with plane bottom for better ground coupling, in single or two levels, with three non-magnetic stainless steel / brass spikes of length 4 inches each.</p> <p>In case of single level, it should have 12 Nos. Geophone coils with two groups of 6 coils in series, connected in parallel with each other and in case of two levels, there should be 06 geophone coils in series in each level and both levels are connected in parallel with other.</p> <p><u>iii. Filling in Housing Body</u> The geophone case will be filled with high viscous electrical insulator oil (e.g. Silicon Oil not rubber silicon) to minimize up-thrust of water and to make the geophone string repairable. Viscosity of oil should be greater than water viscosity.</p> <p><u>iv. Lead-in Cable & Connector Type:</u> Submersible Geophone String should be connected with 30 meters two-core water proof lead having water proof '5517 Push Fit' or Equivalent connector array (male-female) with dust caps. This 30 meters two-core water proof lead should also be enforced with steel rope wire to plant / de-plant the geophones inside water with or without rod.</p> <p><u>v. Geophone Coil and Cable Specifications:</u> The Geophone Coil of submersible group has the following specifications:</p> <table border="0"> <tr> <td>Polarity:</td> <td>SEG polarity standard</td> <td>(geo.+ive to pin on male side)</td> </tr> <tr> <td>Natural frequency:</td> <td>10 Hz for resistive damping</td> <td>(Tolerance: ± 2.5 %)</td> </tr> <tr> <td>Minimum allowable tilt:</td> <td>10 degrees for specified frequency and distortion</td> <td></td> </tr> <tr> <td>Coil resistance:</td> <td>375 Ohms with resistive damping</td> <td>(Tolerance: ± 2.5 %)</td> </tr> <tr> <td>Shunt resistance:</td> <td>1000 Ohms</td> <td>(Tolerance: ± 5%)</td> </tr> <tr> <td>Spurious frequency:</td> <td>≥240 Hz.</td> <td></td> </tr> <tr> <td>Distortion:</td> <td>≤ 0.1%</td> <td></td> </tr> <tr> <td>Open circuit damping:</td> <td>0.25</td> <td></td> </tr> <tr> <td>Damping:</td> <td>68.6%</td> <td>(Tolerance: 0 to +5%, or ± 2.5%)</td> </tr> <tr> <td>Sensitivity with shunt resistance:</td> <td>20.9 V/m/s</td> <td>(Tolerance: ±2.5%)</td> </tr> <tr> <td>Moving mass:</td> <td>11 g</td> <td></td> </tr> <tr> <td>Max coil travel (peak to peak):</td> <td>2 mm</td> <td></td> </tr> </table>	Polarity:	SEG polarity standard	(geo.+ive to pin on male side)	Natural frequency:	10 Hz for resistive damping	(Tolerance: ± 2.5 %)	Minimum allowable tilt:	10 degrees for specified frequency and distortion		Coil resistance:	375 Ohms with resistive damping	(Tolerance: ± 2.5 %)	Shunt resistance:	1000 Ohms	(Tolerance: ± 5%)	Spurious frequency:	≥240 Hz.		Distortion:	≤ 0.1%		Open circuit damping:	0.25		Damping:	68.6%	(Tolerance: 0 to +5%, or ± 2.5%)	Sensitivity with shunt resistance:	20.9 V/m/s	(Tolerance: ±2.5%)	Moving mass:	11 g		Max coil travel (peak to peak):	2 mm		55-02837	1500	No.
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	<p>Operating temperature: -10 degrees C to +70 degrees C (All parameters are specified at +20 to +25 degrees Celsius in vertical position)</p> <p>Lead-in cable conductor: Conductor material Type: Tinned Copper, Strand construction: 19 wires, Strands formation: Standard</p> <p>Insulation: Extrude approved polypropylene and geophone string insulation resistance ≥ 500 M Ohms,</p> <p>Jacket: Approved thermoplastic polyurethane (black color)</p>			
2.	<p><u>Deployment Rod for Submersible Group</u></p> <p>The rod, made up of stainless steel, will be of adjustable length up to 15-meter total length, using 1.5-meter length of pieces (10 Nos.), which can be joined together with the help of threads, not through fixing or clamping. The end piece should have a firm holding for geophone head for pitching it under the water (the sample of holding or clamp attached).</p>	55-02836	15	Sets
3.	<p>Third Party Pre-Shipment Inspection (TPI):</p> <ol style="list-style-type: none"> OGDCL will arrange mandatory third party pre-shipment inspection of equipment at manufacturer's work place as per given scope of work (SOW). Detail SOW will be shared with successful bidder soon after issue of PO. Without TPI, equipment will not be accepted. Inspector would count and confirm the 100% indented quantity as per PO, therefore, bidder is advised to do packing of equipment keeping in view the inspection process. In case TPI is not arranged then technical indenting team of 02 OGDCL professionals may visit the manufacturer's place at OGDCL cost for pre-shipment inspection to ensure that equipment is strictly adheres to given scope of work and SOR specifications. It will be responsibility of bidder to extend full cooperation and ensure availability of ALL equipment for inspection purpose as per demand of inspector to perform the inspection as per OGDCL SOW including but not limited to testing of minimum randomly selected 4-5% geophone strings with available testing equipment. Apart from random testing, the bidder will provide test results of 100% equipment to inspectors on their arrival before shipment (01 soft copy). The tested items would be marked by inspector and packed separately after test for identification. In order to ensure safest supply of the inspected material, the inspector might not only inspect the material but might also witness packing & labelling of the inspected material to be as per industry standards, and then, seal the material at manufacturer's site. The inspector might also witness loading of sealed material into the container(s) at manufacturer's place for transportation to port of shipment & then suitable sealing of the container(s). Then, he might also witness booking / shipment of the sealed container(s) preferably without opening the original seal fixed at manufacturer's site. In case the sealed container(s) are not allowed for booking without checking by port authorities/shipping line, then the checking and resealing at sea port after clearance, to be witnessed by inspectors (TPI firm). TPI SOW is limited to physical inspection/random sample testing of equipment that does not void the performance/operational capability & warranty of equipment as already agreed by OEM & defined in OGDCL SOR. Nothing in this clause shall in any way release the OEM from any warranty or other obligations under this contract. Bidder will be responsible to facilitate pre-shipment inspection (through OGDCL nominated inspector) within delivery period, hence, bidder will be responsible to coordinate and cooperate with nominated inspector / firm and arrange packing of material in view of third party inspection process as described above without affecting the delivery period. 	Compliance required		

- k) Bidder will mention in the bid, the minimum tentative days required to complete inspection of equipment as per detail given above.
- l) If any discrepancy is identified by inspector, OEM will be responsible to rectify that discrepancy and any extra man-days if needed to re-inspect the equipment after rectification of discrepancy, same will be borne by OEM.
- m) All inspection expenses will be borne by OGDCL except expenses (if any) as per clause 6(l).

Terms and Conditions:

1. Delivery period: **90 Days** (Maximum).
2. The bidder must be **original equipment manufacturer (OEM)** of the quoted Geophone Strings. Bid from middleman, distributor or supply house would not be accepted.
3. The bidder must have **valid quality certification**, ISO9001 or equivalent.
4. Bidder will provide **signed & stamped TOR/SOR** along with item and term & condition wise **compliance sheet**.
5.
 - a. The bidder must have **minimum 10 years' experience** of geophones' manufacturing. As proof of experience bidder is required to provide a valid verifiable business license/registration certificate. Business license from Chinese bidders, having unique license / certificate number issued in name of OEM, must be verifiable from relevant issuer authority website (www.gsxt.gov.cn) & (<https://iecms.mofcom.gov.cn>) .
 - b. Bidder will provide **sale record** of minimum sold quantity of **7000 Nos.** submersible geophone strings sold to geophysical companies during **last 05 years**. Bidder would submit the Purchase orders / Contract as Sale Record clearly mentioning the details like name of buyer company, email, web address, postal address, contact information, quantity sold, year of sale etc.
 - c. Bidder will provide the satisfactory **performance certificate** from 02 different renowned international geophysical companies working for seismic data acquisition that they are using bidder's submersible geophone groups satisfactory mentioning the complete contact information that is name of buyer company, quantity sold, date of contract, email, web address, postal address, fax number etc.
6.
 - a. The bidder must **provide samples** along with the bid for technical evaluation, as following;
 - i. Submersible geophone string = 01 No.
 - ii. Geophone coils = 03 Nos.
 - iii. Piece of lead-in cable with connector = only 02 meters.
 - iv. Deployment rod = only 03 pieces of 1.5-meter length including the end piece (holding or clamp attached)
 - b. Test results (01 hard copy) for above provided samples performed with SMT/SGT (Geophone Analyzer), would also be submitted along with the bid. Bidder will provide detail of all parameters (including tolerance limits, temperature coefficient, cable resistance etc.) fed in SMT/SGT (Geophone Analyzer) during performing of these tests. Bidder should have geophone tester (SMT/SGT) and other standard testing equipment to perform the tests and bidder will mention the detail of testing equipment used i.e. make/model of tester
 - c. All items should be clearly embossed/ printed or tagged with manufacturer's monogram / name on it in English, for identification. Samples without monogram/name will be considered as rejected.
 - d. All samples would be tested in laboratory as well as in field operation with recorder for data acquisition as part of technical evaluation.
 - e. The supplied material will be inspected as per approved sample & production sample submitted with the bid.
 - f. **Non Submission of sample with the bid will result in its rejection.**



	<p>g. Successful bidder will also submit production sample of ‘submersible geophone string with deployment rod (03 pieces)’, within 03 weeks after issuance of P.O and after confirmation from OGDCL, LC will be established & bidder will proceed for mass production.</p> <p>7.</p> <p>a. Bidder will provide Original Brochure of the indented item in English including diagrams/drawings for technical evaluation.</p> <p>b. Bidder will provide step wise details of all quality tests performed to ascertain quality standard.</p> <p>c. Geophone String/ coil should meet criteria to pass test standards as 3rd party inspection’s SOW may include standard tests like tumble barrel test for geophone coil, temperature test, leakage test or other industry standards test to confirm the quality. Manufacturer will provide a certificate that it has proper test equipment to perform all standard tests including temperature test, leakage test etc.</p> <p>d. Bidder will provide a certificate that all items are water proof and leakage free.</p> <p>8.</p> <p>a. Bidder will provide minimum 01-year warranty for ‘submersible geophone string’. A warranty certificate to be submitted in this regard.</p> <p>b. Defective items’ replacement during warranty period will be free of all charges and the local agent will also be fully responsible for in time warranty replacement.</p> <p>c. Bidder must submit a compatibility certificate that quoted item will work satisfactorily with latest data acquisition systems (428XL, G3iHD, G3I NXT, 508XT Systems etc.) and will replace any incompatible item free of all charges.</p> <p>d. The bidder or its authorized representative will sign the protocol of acceptance, commissioning and start of warranty.</p> <p>9. The bidder will submit a certificate to ensure supply of spare parts for minimum 03 years.</p> <p>10. Packing of all materials will be as per geophysical industry standards in pallet form having proper labelling.</p> <p>11. Evaluation will be ‘full consignment wise’ C & F by Sea price basis.</p> <p>12. OGDCL may decrease the quantity of items as per its operational requirement before issue of PO.</p> <p>13. Failure in meeting any criteria mentioned in specifications or any terms & conditions will result in rejection of bid.</p> <p>14. All documents being provided must be in English. In case required document is in other language, bidder is required to submit its translated English version along with copy of original document and English translation would prevail.</p>			
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