

OIL & GAS DEVELOPMENT COMPANY LIMITED
PROCUREMENT DEPARTMENT, ISLAMABAD
FOREIGN SECTION E

(To be completed, filled in, signed
and stamped by the principal)

ANNEXURE 'A

Material MULTI GEOPHONE STRINGS (8000 NOs.) AND SPARES
Tender Enquiry No PROC-FE/CB/ECMP-4843/2020
Due Date
Evaluation Criteria FULL

SCHEDULE OF REQUIREMENT

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY SEA	Total Price C & F BY SEA	Deviated From Tender Spec. If Any
1	LAND GEOPHONE STRINGS(detail attached at Sr No.1 of attachment)	Number	7000					
2	MARSHY GEOPHONE STRINGS(details attached at Sr No.2 of attachment)	Number	1000					
3	COILS, GEOPHONE 10 HZ(+/- 2.5%), 375 OHM(+/- 2.5%), VERTICAL BASIC UNIT WITH 1000 OHM DAMPING RESISTOR(details attached at Sr No.3 of attachment)	Number	30000					
4	GEOPHONE LAND CASE(details attached at Sr No.4 of attachment)	Number	500					
5	GEOPHONE MARSH CASE(details attached at Sr No.5 of attachment)	Number	200					

Note:

1. Bid Validity: Bid must be valid for **150 days** from the date of Technical Bid Opening
2. Bid Bond Amount: USD 20,000/- (United States Dollar Twenty Thousand only) or equivalent Pak Rupees, **valid for 180 days** from the date of Technical Bid Opening
3. Evaluation Criteria: - Full Consignment wise CFR Karachi
4. Delivery Period: 120 Days from establishment of LC
5. Bidders are advised to carefully read all the terms and conditions of the Tender Document available on OGDCL website which is an integral part of this Schedule of Requirement

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**ORACLE-ATTACHMENT REQUISITION FOR THE PROCUREMENT OF
8000 MULTI-GEOPHONE STRINGS & SPARES ECMP(GS)/F-03/2020**

SR #	DESCRIPTION	UNIT	QTY.	INDEX NO.
1	<p>LAND GEOPHONE STRINGS</p> <p>a- Geophone element be designed to offer the Seismic industry standard with high quality product.</p> <p>b- Provide high fidelity data in 2-D & 3-D seismic surveys; allowing full bandwidth (10 to 240 Hz) at 2 msec sampling rate.</p> <p>c- Element is fully compatible with latest 24-bit seismic data recording systems especially 428XL,508XT & G3i HD Systems etc</p> <p>Geophone String Configuration Be consisting of twelve nos. of water proof geophones wired at 4 meters spacing in two parallel groups of six geophones in series using three conductor geophone cable.</p> <p>Lead-in 27.5 meters at both ends using 2/3 -conductor geo-cable. Geo- cable must have molded polyurethane pick-up D-loops spaced at 1 meter intervals. Each Geo-string be collected on a carrying hasp of iron with rust proof coating. The total length of geo- string is 99 meters.</p> <p>Connector Type. Both ends of Geophone strings be terminated with water proof '5517 Push Fit' or Equivalent connector array(male-female) with dust caps having interval of 0.5 m between male & female connectors. The D-loop between the male & female connector must be at a distance of 0.25m.</p> <p>Polarity: SEG polarity standard (geo. +ive to pin on male side)</p> <p>Geo-case: High strength rugged waterproof plastic land case (upright type) with 3.00" to 3.25" inch austenitic stainless steel spike (rust-proof & non-magnetic) for ground coupling, case stress relief equals cable break strength.</p> <p>A digital grade Geo-coil with following specifications: -</p> <p>Natural Frequency: 10 Hz (Tolerance: ± 2.5 %) for resistive Damping,</p> <p>Minimum Allowable Tilt = 10 degrees for specified frequency.</p> <p>Coil resistance: 375 Ohms (Tolerance: ± 2.5 %) with resistive damping</p> <p>Shunt resistance: 1000 Ohms (Tolerance: ± 5%)</p> <p>Spurious frequency: ≥240 Hz.</p> <p>Distortion: ≤ 0.1% Minimum Tilt angle for specified distortion = 10 degree, At frequency of distortion=12 Hz.</p> <p>Open circuit Damping: 0.25</p> <p>Damping: 68.6% (Tolerance: 0 to +5%)</p> <p>Sensitivity with shunt resistance: 20.9 V/m/s (Tolerance: ±2.5%)</p> <p>Moving mass: 11 g</p> <p>Max Coil travel (peak to peak): 2 mm</p> <p>Operating Temperature: - 40 degrees C to +100 degrees C</p> <p>(All parameters are specified at +20 to +25 degrees Celsius in vertical position).</p> <p>Cable conductor: Strand construction: 19 wires, Strands formation: Standard</p> <p>Cable O.D: 4.3 mm to 4.6 mm for three conductor wire.</p> <p>Insulation: Extrude approved polypropylene, Jacket: - Approved thermoplastic polyurethane (black color), Hardness: min. 80 shore A Minimum breaking load (3-conductor) 78 kg</p>	No	7,000	55-04-221-F
2	<p>MARSHY GEOPHONE STRINGS</p> <p>Having marsh cases with the same specifications of basic element and configurations as required for serial No. 1, both sides terminated with marsh '5517 Push Fit' or Equivalent connector array(male-female) with dust caps having interval of 0.5 m between male & female connectors. The D-loop between the male & female connector must be at a distance of 0.25m.</p>	No	1000	55-04-222-F

(Handwritten signatures and initials)

Drop cable of one-meter length with outer diameter **7.6 mm to 8.3 mm** and a molded D-loop be installed at 0.35 meter from the marsh phone case entry point. Two or three leader conductor cable for marshy string, outer diameter be 6.35mm (Tolerance: $\pm 2.5\%$) Marsh phone case, with single cable connection, fitted with rust proof 3 to 3.25-inch **brass spike**, water tight and water proof **molded** T-joint for leader and drop cable.

3	Geophone coil damped as per specifications at Sr. No 1.	No	30,000	55-04-203-F
4	Geophone Land case complete with austenitic stainless steel spike (rust-proof & non-magnetic), inclusive lock washers etc as per specifications at Sr.No.1	No	500	55-04-224-F
5	Geophone Marsh case complete with brass spike etc as per specifications at Sr.No.2	No	200	55-04-225-F

Terms and Conditions:

1. Delivery period: **120** 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. Experience will be considered from first sale contract to be provided with bid as proof, mentioning complete contact information of buyer that is name of buyer company, quantity sold, date of contract, email, web address, postal address, fax number etc.
 - b. Bidder will provide **sale record** of minimum sold quantity of **50,000 Nos** multi geophone strings sold to geophysical companies during **last 03 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 03 different renowned international Geophysical Companies working for seismic data acquisition that they are using bidder's 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. The bidder must provide **samples** for Technical Evaluation as per following:
 - a. Item No. 1 = 02 No (Complete Strings with carrying hasp).
 - b. Item No. 2 = 01 No (Complete String with carrying hasp).
 - c. Item No. 3, 4 & 5 = 05 No each
 - d. 01 Meter Geo-Cable having a molded D-loop and fitted with connector at any one end or both to confirm quality of cable / No of strands/insulation/connector type etc
 - e. Test results for item No.1, 2, 3 of above provided samples performed with SMT/SGT (Geophone Analyzer), would also be submitted along with the bid .
 - f. 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.
 - g. All samples would be tested in Laboratory as well as in seismic field operation for data acquisition as part of technical evaluation.
 - h. The Supplied material will be inspected as per approved sample submitted with the bid.
 - i. **Non Submission of samples with the bid will result in the rejection of bid.**
7.
 - a. Bidder will provide Original Brochure of the indented items in English including **diagrams/drawings of all items** for technical evaluation.

- b. Bidder will confirm to provide Land Geophone String having 0.25-meters' distance from Geophone to nearest molded D-loop, so that all geophones in a string may lay in center while in hanging position in hanger.
 - c. Bidder will provide step wise details of all quality tests performed during pre & post manufacturing process of items No 1 & 2 to ascertain its quality standard.
 - d. Geophone String/ coil should meet criteria to pass 'tumble barrel' test standards as 3rd party inspection's SOW may include tumble barrel test, temperature test, leakage test or other industry standards test to confirm the quality. Manufacturer will provide a **certificate** that it has facility to perform all standard tests including tumble barrel test, temperature test, leakage test etc.
 - e. Bidder will provide a **certificate** that all land and marshy geophones are water proof and leakage free.
- 8.
- a. **3rd Party Pre-shipment inspection (TPI)** of the equipment as per TOR/Scope of Work/Purchase Order will be carried out at manufacturer's place as per OGDCL policy at customer's account before shipment. Without TPI, the equipment will not be accepted. TPI may also be monitored by an OGDCL professional at OGDCL cost. Bidder will provide full co-operation to 3rd party inspection team.
 - b. Test record of each land / marshy geophone string by SMT / SGT (Geophone Analyzer), will be provided to OGDCL / third party inspector before shipment (01 soft copy & 01 hard copy).
 - c. 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.
- 9.
- a. Bidder will provide minimum **three years' warranty** for basic element (Geophone Coil) and **one year** for all other material. A **warranty certificate** to be submitted in this regard.
 - b. Defective items' replacement during warranty period will be **free of all charges** and the local supplier will also be fully responsible for in time warranty replacement.
 - c. Bidder must submit a **compatibility certificate** that Geophone Strings (Sr # 1 & 2) will work satisfactorily with latest data acquisition systems (428 XL, G3i HD, 508XT Systems etc) and will replace any incompatible item **free of all charges**.
 - d. The bidder or its authorized representative will sign the protocol of acceptance, commissioning and start of warranty.
10. The bidder will submit a **certificate** to ensure supply of spare parts for minimum 05 years.
11. Packing of all materials will be as per Geophysical industry standards in pallet form having proper labelling.
12. Evaluation will be on full package and C & F by Sea price basis.
13. Failure in meeting any criteria mentioned in specifications or any terms & conditions will result in rejection of the bid.
14. Reference Clause No 4 (Section-I) of tender document, all documents being provided should be in English. In case any document is in other language, bidder is required to submit its translated English version along with copy of original document.