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**PREQUALIFICATION OF MANUFACTURERS/BIDDERS  
FOR THE PROVISION OF ALL SIZES & TYPES DRILLING BITS ALONGWITH  
ENGINEERING SERVICES FOR A PERIOD OF THREE (03) YEARS THROUGH  
PURCHASE/SERVICE ORDERS ON AS AND WHEN REQUIRED BASIS**

**(2020-23)**

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## **SCOPE OF WORK**

OGDCL intends to prequalify Bidders for supply of Drilling Bits for a period of Three (03) years. The scope of work includes provision of All sizes & types drill bits along with Bit engineering services on as and when required basis. Presently the Company is operating with 15 rigs in parallel however the operation may be extended or reduced on as need basis. This scope of work is based on +/- 40 wells drilled per year and could vary depending upon Company's overall yearly plans. All wells are located in three different regions of Country namely North, Centre & South throughout the country. All wells can be classified into deep high pressure high temperature wells, Medium to shallow well depths involving the drilling of hard Limestone, Clay/Clay stone, abrasive sand, sticky & sloughing shales. Wells will be drilled either vertical or deviated depending upon the surface terrain and subsurface target.

The wells include exploratory, appraisal and development having medium to deep depths. The depth range of the wells is up to 6000 meters.

Bidders will prepare and submit their Proposal based on the technical information provided herein as well as the Bidder's own experience.

Bidders will ensure to quote its latest and proven technology bits.

Successful Manufacturers/Bidders will supply bits on direct/outright sale basis and/or on performance basis on as and when required throughout the three (03) year tenure of Prequalification.

## **TERMS OF REFERENCE (TOR)**

### **Manufacturers/Bidders to comply following mandatory requirements for acceptance:**

1. Manufacturers/Bidders will be technically prequalified for a period of three (03) years as per Technical prequalification criteria at Annexure "A". Accordingly Financial Bids will be called from only technically prequalified Bidders during the 03 year prequalification period for any type & size of Bits on as and when required basis.
2. The 03 years period of prequalified Manufacturers/Bidders will start from the publication of Prequalification Notice of successful Manufacturers/Bidders on COMPANY website.
3. OGDCL will place purchase/Service orders during the three years prequalification period to the most advantageous Manufacturers/Bidders against each direct sale/performance base requirement of Bits issued to Prequalified Manufacturers/Bidders on as and when required basis.
4. Bidder will study terms of reference/scope of work along with the tender documents and generally obtain all information required to enable it to submit its proposal and will be deemed to have satisfied itself as to the correctness and sufficiency of its proposal prior to submitting the bid.
5. Prospective Bidders shall take no advantage of any apparent errors or omissions in the Terms of Reference/SCOPE OF WORK Documents. In the event that any errors or omissions are discovered, prospective Bidder/Bidders shall immediately notify Company and specifically set forth any such errors or omissions in its proposal. Prospective Bidder/Bidders will not make any assumption in preparation of its proposal and must seek appropriate clarification from OGDCL.
6. Each Manufacturer must have its Bit application Engineer available in Country throughout the 03 year tenure of Prequalification.
7. Each Manufacturers/Bidder will supply the necessary engineering support like Bit selection for the application, hydraulics and nozzle selection, drilling parameters, proposing suitable drive for application and BHA selection& post run analysis supported with Rock Strength Analysis.

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8. Each Successful Manufacturer/Bidder will provide all the necessary accessories (wrenches, nozzle pliers, bit breakers, ring gauges, etc.) required for its bits on as and when required basis during the tenure of Prequalification.
  9. Each Successful Prequalified Bit supplier/Manufacturer will at its sole cost and upon Company's justified request, will replace unsuitable/poor run/failed bit at no cost to COMPANY with appropriate Bit. The Bit run criteria will be mutually agreed before each bit run and consent will be sought from the bit supplier that will be according to the international applied practices and IADC procedures. Additionally, Bit failure investigation results will be shared by the bit Manufacturer.
  10. Each Successful Manufacturer/ Bidder will provide following Services as part of the proposal;
    - I. One in-house training session per year for OGDCL employees.
  11. The scope of work for the prospective bidders for provision of Drilling Bits and Bit application Engineering Services on as and when required basis is for drilling of  $\pm 40$  wells per year. The wells include Exploratory, appraisal and development having medium to deep depths.
  12. Detail specification of the drill bits required to be purchased on direct sale basis are mentioned at Annexure A-I & A-II to this Scope of work.
  13. Each Prequalified Manufacturer/Bidder will submit performance based bit program proposal for the provided well on as and when required basis according to the information provided, Further Bidders will supplement their proposed bits by providing following information (in order of performance):
    - a. Three best runs in Dakhni/Chanda/Mela/Rajian/Kohat/Nashpa & offset Areas for North region wells. Performance summary back up support by bit records
    - b. Three best runs in Qadirpur, UCH, Zin, Loti & offset Areas for Centre region wells.
    - c. Three Best runs in Kunnar, Pasakhi, Tando allahyar, Thal & offset Areas for South region wells.
    - d. If above mention runs are not available, Bidders can furnish Three (03) best runs for proposed bits in Potohar/North, South & Centre region accordingly in similar formations mention in Annexure B.
    - e. Any other offset well data supporting the offered/proposed bits.
  14. Bidders to submit detailed information about the bit runs including but not limited to:
    - a. Description & thickness of each formation drilled
    - b. BHA configuration
    - c. Dull Grading
    - d. ROP, GPM, SPP
    - e. Drilled with RSS, RSS with motor or only with Downhole motor etc.
  15. In case the Bidders has proposed drill bits those are different in design or cutter type from the bits mentioned in best run case, the variance are to be clearly mentioned and reason should be provided as to how proposed change can help in drilling optimization & better performance.
  16. Bidders are also encouraged to provide its best 5 to 10 runs, preferably as case studies/performance reports format in Dakhni/Chanda/Mela/Rajian/Nashpa/Surqamar, Kohat, Qadirpur, UCH, Zin, Loti, Kunnar, Pasakhi, Tando allahyar, Thal blocks or in their surrounding vicinity areas regardless of the lithological information given at Annexure-B.
  17. Bidders are advised to prepare and submit performance based bit proposal on Meterage rate (ROP) & Total Thickness drilled based on the technical and geological information provided by COMPANY. Based

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on point 18, proposed bits should be the same as submitted performance summaries or better design with technical justification.

18. The Prequalified Manufacturers/Bidders will submit the detailed bit program for the proposed performance based bits which should include the following but not limited to this.
  - a. Simulation of the hydraulics during the drilling; standpipe pressure, bottom hole pressure, pressure at the zone(s) of interest calculation. OGDCL will provide details of the rig capacity, drive type and service company selected for the performance drilling]
  - b. Specification and quantity of the bits to be used
  - c. Recommended drilling parameters
  - d. Bit nozzles to be used
  - e. Best Performance runs for similar lithology
  - f. Bidder will ensure to quote its latest cutter and proven technology Bit along with an original certificate on the letter head of its manufacturing facility stating/confirming the cutter name and bit family. As documented proof, Bidder will be required to provide a case study from Pakistan or similar application”.
19. Bits & nozzles should be newly manufactured and un-used. No refurbished bit will be acceptable.
20. Bidder will be required to provide qualified and well experienced Bit Engineer to provide engineering support from the office or sometimes at the rig site to manage the applied bit technology on Run bit while maintaining conformance with best drilling parameters in collaboration with OGDCL rig team and office.
21. Bidder is required to enclose CV’s of 2 Bit application Engineers covering the following details.
  - a. Technical and academic qualification
  - b. Technical and field experience (Minimum 5 years as Bit Engineer experience with 3 years in Country is Mandatory) Training /Cross-training/Courses/Seminars.
  - c. Languages spoken (English as minimum requirement).
22. COMPANY reserves the right to reject dedicated Engineer at any time. Extra cost caused by such replacement shall be for Contractor’s account. Successful Bidder shall dedicate well experienced senior engineers to act as Manufacturer’s / Bidders daily contact person for performance of the Services.
23. Bit Supplier/ Manufacturer’s Bit Engineers will prepare preliminary and final designs and reports according to the OGDCL expectations. Bit Supplier shall maintain a staff of qualified technical personnel available to support all the SERVICES provided by Manufacturer during this Prequalification tenure.
24. Bidder proposed ‘bit program proposal’ for performance based Bits on Provided well data on as and when required basis according to the information given in “Annexure B” has to be prepared both for top drive / rotary drilling and motor/turbine/RSS driven performance drilling options.
25. Bidder to provide complete list of the offered bits proposed on **Direct Sales** basis along with their specs sheet as per “Annexure A” without prices.
26. Work history for the past 10 years; (reference list, major achievements concerning bit performance) to be provided with Bid.
27. Technical description of the bits and accessories (name, type, technical parameters and specifications with detailed data sheets/style sheets) to be provided with the Bid.
28. Complete Product Catalogue of the Manufacturer to be provided with the Bid.

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29. Provision of PDC bit repairing services, detailed proposal to be provided by Manufacturers/Bidders in Bid document about its capacity to provide repair services in Pakistan or within the Region in case if such service is required by OGDCL. A separate financial proposal may be asked on case by case and as required basis from the relevant bidder.
  30. As a support to well planning the Manufacturer/Bidder must work out detailed bit program if it is requested by the Company. All available data (well construction, geological formations, offset well data, drilling regimes, wire line logs, etc.) will be provided by OGDCL for the Contractor to carry out sufficient investigation, so that a detailed recommended bit program can be developed prior to spud. The program will be reviewed/ discussed and approved by OGDCL.
  31. Third party inspection by internationally reputed inspection company will be required for each consignment against the issued purchase order on direct sale basis. TPI will be arranged by OGDCL from any of the OGDCL nominated TPI Company. Bidder will assist and make necessary arrangement for TPI. Bidder to confirm that the Third Party Inspection (TPI) report verified by OGDCL will be provided with the shipping documents for LC encashment.

**Scope of work for TPI of Bits on Direct Sale basis will be as follows.**

TPI Company will perform the following task.

- a. Visual inspection for any defects.
- b. Verification that all equipment is brand new and unused.
- c. Verification that all the materials (quantity & specifications) & documents are in accordance with Purchase order & API 7-1 Specifications.

OGDCL reserves the right to do more extensive TPI at its discretion during anytime and for any direct sales order.

32. Bit supplier is requested to provide a list and description of the accessories that are needed for running and operating the bits as per Annexure A-I and A-II. The accessories have to include the bit nozzles (full range covering all the requested bit sizes and all the reasonable nozzle sizes), nozzle setting hand tools (wrenches, pliers as applicable), bit breakers both for roller cone bits (specify quantities for RC Bit Breaker) and fixed cutter bits, ring gauges and other necessary items, if any.
33. Detail of various geological formations and lithological columns to be drilled can be found in Annexure "B". which gives an overview of complete lithological description for one of the deep wells to be drilled in respective area.
34. In order to offer the best bits on performance basis with reference to optimizing the drilling of upcoming wells, you are required to study the information of nearest offsets and include performance analysis where possible. The proposal should highlight:
  - a. Historical Offset Performances. Performance summaries should be backed by bit records
  - b. Application Analysis
35. For each bit offered on performance basis, following information should be highlighted:
  - a. Proposed type & IADC code of the bit. *[IADC code or equivalent in case of PDC bits]*
  - b. The detailed spec/design sheet for the bit.
  - c. The proposed sizes and number of Bit nozzles / Jet nozzles.
  - d. Proposed interval that the bit is expected to drill (depths & the length of interval)
  - e. Proposed Drilling parameters & hydraulics that should be applied to the bit
  - f. Proposed ROP that the bit is going to provide with on bottom drilling hours
  - g. Performance deals shall be offered against best/benchmark ROP achieved in each Formation as an alternative.

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36. Incomplete information in the bid may lead to non-compliant & rejection of bid.
  37. Shipment from ACU member countries: In Case of Shipment from ACU Member Countries, The LC Beneficiary Should Be of That Particular Country from Where the Consignment Is Being Shipped.
  38. All the documents should be submitted in original, properly numbered, duly signed and stamped. Any document not signed and stamped will not be considered for evaluation purpose.
  39. Any documents other than English language should be translated in English language first and should be duly attested by foreign office.
  40. Clean acceptance of Terms & Conditions of Master set of Foreign Tender Documents uploaded on OGDCL's website, Schedule of Requirement is required from Manufacturer / Bidder.
  41. OGDCL, at any stage of the procurement proceedings, having credible reasons for or prima facie evidence of any defect in firm's capacities, may require them to provide information concerning their professional, technical, financial, legal or managerial competence of already pre-qualified firms. OGDCL, shall disqualify a supplier or contractor if it finds, at any time, that the information submitted by those concerning qualification as supplier or contractor were false and materially inaccurate or incomplete.
  42. For supply of material all terms & condition of the Master Set of Tender Documents available on OGDCL's website will be applicable.
  - 43. FOREIGN PROCUREMENT PAYMENT TERMS (COMPETITIVE BIDDING, PREQUALIFICATION AND PROPRIETARY MODE OF PROCUREMENT).**

Clause No: 4 of Section-III (Part-B) i.e. Conditions of Contract "Special" of Tender Document has been amended as follows:

Following payments methods have been approved for Competitive Bidding/Press Tender, Prequalification and Proprietary mode of procurement effective from February 27, 2018.

**I. Tender value less than or equal to US\$ 200,000:**

Payment to the Contractor/ bidder in foreign currency shall be made by establishing in favor of the Contractor an irrevocable Letter of Credit (hereinafter called the L/C). 70 % Payment (s) under the L/C will be made for the FOB/ CFR / CPT (as the case may be) price of material of each shipment upon submission of the shipping documents. Balance 30% Payment will be released after receipt, inspection and acceptance of material.

**II. Tender value more than US\$ 200,000:**

Payment to the Contractor/ bidder in foreign currency shall be made by establishing in favor of the Contractor an irrevocable Letter of Credit (hereinafter called the L/C). 80 % Payment (s) under the L/C will be made for the FOB/ CFR / CPT (as the case may be) price of material of each shipment upon submission of the shipping documents. Balance 20% Payment will be released after receipt, inspection (in addition of pre-shipment inspection) and acceptance of material.

**ANNEXURE A-I**

The tables below show the assortment of drill bits that are expected to be used for Company’s drilling operations on direct sale & on performance basis. The additional features for bits of any Size, IADC code & type can be provided as an additional sheet.

**ROLLER CONE (TRICONE) MILL TOOTH BITS FOR DIRECT SALE BASIS**

**Premium Bits Only with IADC between 115 – 3X7; Sealed Bearing**

Bit Size	IADC	Abrasion Resistance cutting structure	Heel (Outer) Row Protection	Leg /Shirt tail Protection	Bearing Reliability	Hydraulically Enhanced cutting structure cleaning (bit balling prevention) (Yes/No)	Center Jet(s) For Size 12 1/4” and above	Performance Data provided in each region of Country i.e. (North, Centre & South) ** Yes/No	Bit Family/ Technology (</=5 years old) (Yes/No)	Premium bits with Sealed Bearing (Yes/No)	Offered Bit Type
		(Yes/No)	(Yes/No)	(Yes/No)	Mention Max (Krevs*) @85% reliability		(Yes/No)				
28”											
26”											
22”											
17 ½”											
17”											
12 ¼”											
8 ½”							Not Applicable				
6”							Not Applicable				
5-7/8”							Not Applicable				
4-1/8” & smaller							Not Applicable				

\* Krevs to be defined for all hole sizes of supplied bits. Bearing reliability must be minimum 85%

\*\* Provide basis / justification to quote this Bit in case if offer is based on Non OGDCL data. In all cases provide ROP (m/hr) & Total Meterage for the offered bit

**ROLLER CONE (TRICONE) INSERT BITS FOR DIRECT SALE BASIS**

**Premium Bits Only with IADC 4X5 and above; Sealed Bearing**

Bit Size	IADC	Enhanced Heel (Outer) Row Protection	Enhanced Leg / Shirt tail Protection	Diamond Enhanced Heel (min. 33%) & Leg tail Protection (TCI)	Bearing Reliability	Hydraulically Enhanced cutting structure cleaning (bit balling prevention) (Yes/No)	Center Jet(s) For Size 12 1/4" and above	Performance Data provided in each region of Country i.e. (North, Centre & South) ** Yes/No	Bit Family/ Technology (</=5 years old) (Yes/No)	Premium bits with Sealed bearing (Yes/No)	Offered Bit Type
		(Yes/No)	(Yes/No)	(Yes/No)	Mention Max (Krevs*) @85% reliability		(Yes/No)				
28"				Not Applicable							
26"				Not Applicable							
22"				Not Applicable							
17 1/2"				Not Applicable							
17"				Not Applicable							
12 1/4"											
8 1/2"							Not Applicable				
6"							Not Applicable				
5-7/8"							Not Applicable				
4-1/8" & smaller							Not Applicable				

\* Krevs to be defined for all hole sizes of supplied bits. Bearing reliability must be minimum 85%

\*\* Provide basis / justification to quote this Bit in case if offer is based on Non OGDCL data. In all cases provide ROP (m/hr) & Total Meterage for the offered bit

TCI – tungsten carbide insert



**ANNEXURE A-II**

**PDC BITS DIRECT SALE & ON PERFORMANCE BASIS - Premium Bits Only**

Bit Size	Matrix / Steel body	No. of Blades - Cutter Sizes	Back up / Back Row cutting structure on blades (Yes/No)	Cutter Type (High Tier) Mention Premium Name [Abrasion & Impact Resistance] (</= 3 years old)	New Bit Family/ Technology (Yes/No) (</= 3 year Old)	Is bit equipped with next Generation Cutters (Special Geometric Shape / latest technology) If yes, then mention Trademark name (</=3 years old)	Directional Control and Stability on motor / RSS (Yes/No)	Anti-balling feature (Yes/No)	Back reaming, Gauge features (Yes/No)	Thermal Stability (TSP) gauge protection features (Yes/No)	Performance Data in each region of Country i.e. (North, Centre & South) ROP (m/hr) ** (Yes/No)	Junk slot area (JSA) defined in per sq. inch. Bits with higher JSA will be preferred	Quoted Bit Family Brand Name (Please Specify) Only Premium type acceptable	Offered bit type
26"														
22"														
17 ½"														
17"														
12 ¼"														
8 ½"														
6"														
5-7/8"														
4-1/8" and smaller														

\*\* Provide basis / justification to quote this Bit in case if offer is based on Non OGDCL data. In all cases provide ROP (m/hr) & Total Meterage for the offered bit

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**Pricing Mechanism (For Bits procured on Performance Basis). To be quoted on FOR/CFR/CPT basis**

**Performance Pricing Matrix:**

**A = Below Rotary Table Charges (40% of the total bit quoted price)**

**B = ROP Price Part and will be calculated as below;**

**B =  $\frac{(30\% \text{ of Total Bit Price}) \times \text{Actual ROP}}{(\text{Benchmark or Promised ROP})}$**

**C = Meterage Price Part and will be calculated as below;**

**C =  $\frac{(30\% \text{ of Total Bit Price}) \times \text{Actual Meters Drilled}}{(\text{Benchmark or Promised Meterage})}$**

**Total Bit Performance Price= D = A + B + C**

- Bit would become Company's property once it completes 80% Performance benchmark.
- Bit Engineer, Custom Clearance, duties and Taxes would be on Bidders account.
- Total price will not exceed more than bit's total offered performance price basis under any situation.
- Payment for performance based bits will be made against verified invoices after its run.

**TECHNICAL EVALUATION CRITERIA - MANDATORY REQUIREMENTS**

Sr. No.	Item Description	Bidder's Response
1	<p><b>Manufacturer should have at least 10 years' experience of Drill Bits manufacturing and supply outside its country of origin / manufacture.</b>                      * Documentary evidence to be submitted along with Bid.</p>	
2	<p><b>Documentary evidence of Manufacturers regular Bits supply record to the E&amp;P Companies other than OGDCL e.g. PPL, OMV, Petronas, BP, ENI, Saudi Aramco etc. or of equivalent stature in last 10 years.</b>                      (Documentary evidence to prove the equivalent stature of E &amp; P Company other than specified above will be required along with technical bid, to ascertain the equivalency of E &amp; P Company other than specified above will be COMPANY sole discretion).                      * Manufacturer to provide last consecutive 10 year's sale record on yearly basis starting from year 2010.</p>	
3	<p><b>Confirmation that Manufacturer has independent R&amp;D facility</b>                      * A documentary evidence to be supplied with the Bid.</p>	
4	<p><b>Manufacturer / Bidder must have local support office in Pakistan</b>                      * A documentary evidence to be supplied with the Bid.</p>	
5	<p><b>Manufacturer / Bidder confirmation to supply Drill Bits on outright purchase (direct sale) &amp; Performance basis at the discretion of Company.</b></p>	
6	<p><b>Manufacturer must have Engineering &amp; Operations Team in Country -Minimum, 1 x Bit Engineer.</b></p>	
7	<p><b>Manufacturer/Bidder must submit letter for acceptance of all OGDCL's Tender documents clauses without any exceptions.</b></p>	
8	<p><b>Manufacturer should provide copies of</b></p> <ul style="list-style-type: none"> <li>• ISO 9001 – Quality, API Q1 9th Edition</li> <li>• Manufacturing Quality,</li> <li>• Quality, ISO 14001 – Environmental and OHSAS 18001 – Health &amp; Safety, or equivalent</li> </ul>	

**TECHNICAL SCORING CRITERIA**

S. No	Description	Allotted Points
1	<b>Manufacturers' Local Market (Pakistan) Experience of supplying Drill Bits &amp; Engineering Services during last consecutive 10 years starting from year 2010.</b> *A documentary evidence to be submitted along with the Bid.	<b>10</b>
	≥ 10 years	10
	< 10 years	0
2	<b>Local support office of Manufacturer</b> * A documentary evidence to be submitted along with the application	<b>5</b>
	Operational Support office in Pakistan	5
	Operational Support office outside Pakistan	0
3	<b>The Manufacturers quoted plant of PDC &amp; Tricone Bits must have valid &amp; last Consecutive 10 years back API 7-1 Certification for manufacturing of PDC &amp; Tricone Bits.</b> * A documentary evidence to be submitted along with the Bid.	<b>15</b>
	≥ 10 years for both PDC & Tricone Bits	15
	>5 but < 10 years for both PDC and Tricone Bits	10
	< 10 years only for PDC OR Tricone Bits	0
4	<b>Establishment of Manufacturer</b> *A documentary evidence to be submitted along with the Bid.	<b>10</b>
	Above 20 years	10
	Between 15 - 20 years	5
	Less than 15 years	0
5	<b>Supply of Drill Bits</b> *Unpriced copies of at least 10 different E & P companies of other than manufacturer's own country purchase orders sold during the last ten (10) years starting from year 2010 for each below Size of Tricone & PDC Bits to be submitted.	<b>22 (12 Tricone+10 PDC)</b>
	<b>Bit Sizes (Tri-cone)</b>	<b>12</b>
	36"	1
	28"	1
	26"	1
	22"	1
	17 1/2"	1
	17"	1
	12 1/4"	1
	8 1/2"	1
	6"	1
	5 7/8"	1
	4 1/8"	1
	3 3/4", 3-7/8", 3-1/2"	1
<b>Bit Sizes (PDC)</b>	<b>10</b>	

	26"	1
	22"	1
	17 1/2"	1
	17"	1
	12 1/4"	1
	8 1/2"	1
	6"	1
	5 7/8"	1
	4 1/8"	1
	3 3/4", 3-7/8", 3-1/2"	1
6	<b>Scope of Work Performed in Country Market</b>	<b>5</b>
	* A documentary evidence to be submitted along with the Bid	
	Bits supplied to 5 E & P Companies in Country till tender closing date.	5
	Bits supplied to < 5 E & P Companies in Country till tender closing date.	0
7	<b>Offered Delivery Time to Karachi Sea / Air Port after Order Confirmation (for Manufacturing on Order)</b>	<b>10</b>
	< 8 Weeks (PDC) & < 10 Weeks for Roller cone	10
	8 - 10 Weeks (PDC) & 10-12 weeks (Roller cone)	5
	> 10 Weeks (PDC) & > 12 weeks for (Roller cone)	0
8	<b>Manufacturer is currently manufacturing Bicenter Bits.</b>	<b>4</b>
	*A documentary evidence to be submitted along with the Bid.	
	Yes	4
	No	0
9	<b>Bit &amp; BHA Design/Optimization Engineer</b>	<b>4</b>
	(Manufacturer to submit CV)	
	≥ 5 years' Experience	4
	< 5 years' Experience	0
10	<b>Case studies</b>	<b>10</b>
	(Manufacturers to submit at least 01 case study against each size of Bit)	
	Local Case Study with Customer name & Details	10
	International Case Study with Customer name & details	5
	No case study	0
11	<b>Manufacturer's financial standing for the last 05 years</b>	<b>5</b>
	(Annual sales of all sizes drilling Bits during last five years should be)	
	*A documentary evidence to be submitted along with the Bid	
	> 5 Million USD per year	5
	3 - 5 Million USD per year	3
	< 3 Million USD per year	0
<b>TOTAL</b>		<b>100</b>

**Note:**

1. The overall minimum score required for technical acceptance is 85%.

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**ANNEXURE B****(NORTH REGION)**

IT INCLUDES FOLLOWING BUT NOT LIMITED TO THESE CONCESSIONS I-E, NASHPA; MELA; KOHAT; GURGALOT; DAKHINI; SOGHRI; FIMKASAR; CHAKNAURANG; KAL AND MIANWALI ETC.

<i>S.No.</i>	<i>Formation</i>	<i>Interval MD(m)</i>	<i>Lithology</i>
1	CHINJI	000-1998	Sandstone and Clay/Claystone
2	KAMLIAL	1998-2296	Sandstone and Clay/Claystone
3	MURREE	2296-3882	Sandstone and Clay/Claystone
4	KOHAT	3882-3998	Limestone, Marl and Shale
5	KULDANA	3998-4075	Claystone, Marl and Shale
6	CHORGALI	4075-4118	Limestone and Dolomite
7	SAKESSAR	4118-4278	Limestone with thin beds of Marl
8	NAMMAL	4278-4350	Shale with thin bands of Marl
9	PATALA	4350-4472	Limestone with alternations of Shale
10	LOCKHART	4472-4637	Limestone
11	LUMSHIWAL	4637-4659	Shale with thin beds of Sandstone
12	CHICHALI	4659-4677	Shale with traces of Sandstone
13	SUMANASUK	4677-4689	Limestone with streaks of Shale
14	SHINWARI	4689-4717	Alternate beds of Sandstone, Shale
15	DATTA	4717-4789	Sandstone with streaks of Shale and Clay/Claystone
16	KINGRIALI	4789-4811	Dolomite with thin beds of Shale and Marl.
17	TRIDIAN	4811-4828	Shale with intercalations of Sandstone and Clay/ Claystone.

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(CENTER REGION)

IT INCLUDES FOLLOWING BUT NOT LIMITED TO THESE CONCESSIONS1 -, PIRKOH; UCH; LOTI; ZIN; DHODAK; BAHU; MARI AND, QADIRPUR ETC.

<i>S.No.</i>	<i>Formation</i>	<i>Interval(m)</i>	<i>Lithology</i>
1	DRAZINDA	000-204	Shale and Limestone
2	PIKOH	204-270	Limestone
3	SIRKI	270-540	Shale and Limestone
4	HABIBRAHI	540-570	Limestone and Shale
5	ALBASTER	570-715	Shale, Gypsum, Limestone and Marl
6	RUBBLY LIMESTONE	715-1020	Limestone and Marl
7	GHAZIJ SHALE	1020-1870	Shale, Marl and Limestone
8	DUNGAN	1870-1895	Limestone and Shale
9	UPPER RANI KOT	1895-1968	Shale, Marl
10	LOWERRANI KOT	1968-2134	Sandstone, Shale
11	PAB SANDSTONE	2134-2528	Sandstone, Shale
12	FORTMUNRO	2528-2858	Limestone, Marl
13	MUGHALKOT/ PARH	2858-3001	Limestone, Marl and Shale
14	UPPERGORU	3001-3185	Limestone, Marl, Shale and Siltstone
15	LOWERGORU	3185-3388	Limestone, Marl, Shale and Siltstone
16	SEMBAR	3388-3804	Shale, Sandstone and Siltstone
17	CHILTAN	3804-4150	Limestone, Marl and Shale

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*(SOUTH REGION)*

IT INCLUDES FOLLOWING BUT NOT LIMITED TO THESE CONCESSIONS I-E, KUNNER; PASAHKI;SINJHORO; TANDOALLAHYAR;TANDOALAM;GUDDU;THAL;THORA;LASHARI; BITRISIM; SARA; KHEWARI;TEGAN AND NIM ETC.

S.No.	Formation	Interval(m)	Lithology
1	ALLUVIUM	00-88	Lose Clay and rare Conglomerate
2	LAKI	88-600	Limestone {Chalky, mud stone)and Shale
3	RANIKOT	600-900	Sand, Sandstone, Shale, Clay and minor Limestone
4	KHADRO	900-1000	Basalt (hard) inter bedded with Sand and minor Clay.
5	PARH	1000-1100	Chalky Limestone
6	UPPERGORU	1100-2100	Marl with minor Shale and rare Limestone beds.
7	LOWER GORU	2100-3400	Sandstone, Shale, Marl and rare Limestone and Siltstone beds.
8	SEMBAR	3400-4000	Same as above except relatively more Siltstone.
9	CHILTON	Below 4000	Limestone