

**Enclosed Limited Tender No. SDG3875L20/08 for Supply, Installation & Commissioning of Two (2) Numbers Open Hole Logging Units has been issued to the following parties only:**

- 1. M/s Baker Hughes Oilfield Operations Inc.**
- 2. M/s Halliburton Export Inc.**
- 3. M/s Schlumberger Oilfield Eastern Limited**
- 4. M/s Weatherford Oil Tool M.E. Ltd.**



**OIL INDIA LIMITED**  
**(A Govt. of India Enterprise)**  
**P.O. Duliajan – 786602, Assam**

Telephone No. (91-374) 2808705

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- Tender No. & Date** : SDG3875L20/08 dated 18.02.2020
- Tender Fee** : NOT APPLICABLE
- Bid Security Amount** : INR 1,11,55,700.00 OR US\$ 1,54,320.00
- Bidding Typ** : SINGLE STAGE TWO BID SYSTEM
- Bid Closing on** : 01.04.2020 (at 11.00 Hrs. IST)
- Bid Opening on** : 01.04.2020 (at 14.00 Hrs. IST)
- Bid Validity** : Bid should be valid for **120 days** from bid closing date.
- Bid Bond Validity** : Bid Bond Should be valid up to **31.03.2021**
- Performance Guarantee** : **Applicable @ 10% of Order value**
- Integrity Pact** : **Applicable**
- List of Annexures Applicable** :  
**Annexure-I: Specifications, General & Special notes to bidders**  
**Annexure-II: Bid evaluation & Rejection Criteria**  
**Annexure-III: Check List (Commercial)**  
**Annexure-IV: Certificate of Annual Turnover & NetWorth**
- Format-A-No Deviation Confirmation**
- Annexure K- Format of undertaking by Bidders towards submission of authentic Information/document**


**AA:: (I) MATERIAL DESCRIPTION, TECHNICAL SPECIFICATIONS & QUANTITY:**

Item No.	MATERIAL DESCRIPTION	QTY.	UOM
10	New state-of-art, heavy duty, computerized truck-mounted integrated Open Hole Logging Unit with downhole logging tools and accessories.	1	No.
20	New state-of-art, heavy duty, computerized truck-mounted integrated Open Hole Logging Unit with downhole logging tools and accessories.	1	No.
30	Training & inspection of Item Sl. No. 10 & 20	1	AU
40	Installation & commissioning of Item Sl. No. 10 & 20	1	AU

**BB :: GENERAL NOTES TO BIDDERS:**

Sl. No.	Clause description
1.0	<p><b><u>Tender fee is not applicable against this tender.</u></b></p> <p><b><u>Bidders to take note of the following:</u></b></p> <ol style="list-style-type: none"> <li><b><u>1.</u></b> Bidders without having E-tender Login ID and Password should complete their online registration at least seven (7) days prior to the scheduled bid closing date and time of the tender. For online registration, Bidder may visit the OIL's E-tender site <a href="https://etender.srm.oilindia.in/irj/portal">https://etender.srm.oilindia.in/irj/portal</a></li> <li><b><u>2.</u></b> Necessary Login ID&amp; Password will be issued by OIL only after submitting the complete online registration by the Bidder. In the event of late registration/incomplete registration by Bidder, OIL INDIA LIMITED shall not be responsible for late allotment of User ID &amp; Password and request for bid closing date extension on that plea shall not be entertained by Company.</li> <li><b><u>3.</u></b> MSEs Units (manufacturers/Service Providers only and not their dealers/distributors) who are already registered with District Industry Centers or Khadi&amp; Village Industries Commission or Khadi&amp; Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts &amp; Handloom or any other body specified by Ministry of MSME are exempted from payment of Bid Security (EMD) irrespective of monetary limit mentioned in their registration, provided they are registered for the item they intend to quote/participate.</li> <li><b><u>4.</u></b> For availing benefits under Public Procurement Policy (Purchase preference &amp; EMD exemption), the interested MSE Bidders must ensure</li> </ol>

	<p>that they are the manufacturer/ service provider of tendered item(s) and registered with the appropriate authority for the said item(s). Bids without EMD shall be rejected, if the technical offer does not include a valid copy of relevant MSE Certificate issued by appropriate authority specifying the item as per tender. Therefore, it is in the interest of such MSE Vendors to furnish a copy of complete certificate to the concerned tender handling officer of OIL at least seven (7) days prior to the scheduled Bid Closing Date of the tender; seeking clarification/confirmation as to whether their registered item is eligible for EMD exemption or not. Late communications in this regard and request for bid closing date extension on that plea shall not be entertained by Company.</p>
2.0	<p><b>Bid Security/EMD/Performance Bank Guarantee – Must be paid either through online mode or Submission of Bank Guarantee/LC only. No DD/Cheques/Cashier Cheque or any other mode will be acceptable.</b></p> <p><b>The Bank Guarantee issued by bank must be routed through SFMS platform as per following details:</b></p> <p>a. (i) “MT760/ MT760 COV for issuance of bank guarantee (ii) MT767/ MT767 COV for amendment of bank guarantee</p> <p>The above message/intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Duliajan Branch, IFS Code: UTIB0001129. Branch Address: Axis Bank Ltd., Duliajan Branch, Daily Bazar, Jyotinagar, Duliajan, Dist-Dibrugarh, Pin- 786602.</p> <p>b. The vendor shall submit to OIL the copy of the SFMS message as sent by the issuing bank branch along with the original bank guarantee.</p>
3.0	<p>The tender will be governed by “General Terms &amp; Conditions” for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders) including Amendments &amp; Addendum to “General Terms &amp; Conditions” for e-Procurement.</p>
4.0	<p>Bid must be submitted online through OIL’s e-procurement portal. Bid submitted in any other form will be rejected.</p>
5.0	<p>Please note that all tender forms and supporting documents are to be submitted through OIL’s e-Procurement site only <b>except following documents which are to be submitted manually in sealed envelope super scribing tender no. and due date to The GM Materials, Materials Department, Oil India Limited, Duliajan- 786602, Assam on or before 13:00 hrs (IST) on the Bid Closing Date mentioned in the Tender.</b></p> <p><b>a) Original Bid Security along with two duplicate copies of Bid Security.</b> <b>b) Any other documents which have been particularly asked for in this tender for submission.</b></p>
6.0	<p>Bidders must ensure that their bid is uploaded in the system before the tender</p>

	<p>closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time, failing which the offer shall be rejected.</p>
7.0	<p>The tender is invited under <b>SINGLE STAGE-TWO BID SYSTEM</b>. The bidder has to submit both the <b>“TECHNO-COMMERCIAL UNPRICED BID”</b> and <b>“PRICED BID”</b> through electronic form in the OIL’s e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender. The “Techno-commercial Unpriced Bid” shall contain all technical and commercial details except the prices which shall be kept blank. Details of prices as per Bid format / Commercial bid to be uploaded as attachment in the Attachment Tab “Notes and Attachments”. Any offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in the tender.</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Notes and Attachments</div> <div>➔ <b>Only Price Details Should Be Uploaded</b></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Technical attachments</div> <div>➔ <b>All technical bid documents except price details</b></div> </div> <p style="margin-top: 20px;"><b>Please do refer “NEW INSTRUCTION TO BIDDER FOR SUBMISSION” for the above two points and also please refer “ New Vendor Manual (effective 12.04.2017) ” available in the login Page of the OIL’s E-tender Portal.</b></p> <div style="display: flex; align-items: center; margin-top: 20px;">  <div style="margin-left: 20px; text-align: center;"> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; background-color: #f9a825; color: white; width: fit-content;">             Click here for the New Manual &amp; Instruction           </div> </div> </div>
8.0	<p>In Technical Bid opening, only Technical Rfx will be opened. Therefore, the bidder should ensure that “TECHNO-COMMERCIAL UNPRICED BID” should contain details as mentioned in the technical specifications as well as BEC/ BRC and upload the same in the Technical RFx Response-&gt; User -&gt; Technical Bid. <b><u>No price should be given in above Technical Rfx otherwise the offer will be rejected.</u></b> Please go through the help document in details before uploading the document and ensure uploading of technical bid in the Technical RFx Response-&gt; User -&gt; Technical Bid only. The “PRICE BID” must contain the price schedule and the bidder’s commercial terms and conditions. Details of prices as per Bid format / Commercial bid can be uploaded as Attachment under the attachment option under “Notes &amp; Attachments”.</p>

9.0	PRICED BIDS OF ONLY THOSE BIDDERS WILL BE OPENED WHOSE OFFERS ARE FOUND TO BE TECHNO-COMMERCIALLY ACCEPTABLE.
10.0	Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the bid or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.
11.0	Please mention clearly in your quotation the Net. Weight, Gross Weight & Volume, Indian Agent's Name and its Commission, Payment Terms, Ocean Freight, Port of Loading, Delivery period, Country of origin with manufacturer's name, etc.
12.0	To ascertain the substantial responsiveness of the bid, OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by OIL, failing which the offer will be summarily rejected.
13.0	Other terms and conditions of the tender shall be as per "General Terms & Conditions" for e- Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders). However, if any of the Clauses of the Bid Rejection Criteria (BRC) / Bid Evaluation Criteria (BEC) mentioned here contradict the Clauses in the "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders) of the tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.
14.0	All the Bids must be Digitally Signed using "Class 3" [Organization] digital certificate (e-commerce application) only as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3" [Organization] digital certificate, will be liable for rejection.
15.0	<p>Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.</p> <p>"In order to bid for OIL e-tenders all the vendors are required to obtain a legally valid Digital Certificate Class III [Organization] along with Encryption Certificate as per Indian IT Act from the licensed Certifying Authorities (CA) operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. Digital Signature Certificate comes in a pair of Signing/verification and Encryption/decryption certificate. Bidder should have both the Signing/verification and Encryption/Decryption certificate for Signing and encryption, decryption purpose respectively. The driver needs to be installed once, without which the DSC will not be recognized. While participating on e-Tendering the DSC token should be connected to your system.</p> <p>Encryption certificate is mandatorily required for submission of bid. In case bidder created response with one certificate (using encryption key) and bidder change his Digital Signature Certificate then old certificate (used for encryption) is required in order to decrypt his encrypted response for getting the edit mode of the response. Once decryption is done, bidder may use new DSC certificate for uploading and submission of their offer. It is the sole responsibility of the bidder to keep their DSC certificate properly. In case of loss of the certificate,</p>

	OIL INDIA LTD is not responsible."
16.0	Bidders to note that Govt. of India under Micro, Small and Medium Enterprises Development (MSMED) Act 2006, has proclaimed the Public Procurement Policy, 2012 with effect from 1st April, 2012 in respect of procurement of goods and services, produced and provided by micro and small enterprises, by its Ministries, Departments and Public Sector Undertakings for promotion and development of Micro and Small Enterprises. A new Clause on applicability of Public Procurement Policy for procurement of goods from Micro and Small Enterprises (MSE) in the tender is furnished vide Amendment to General Terms and Conditions for Global Tender (MM/GLOBAL/E-01/2005). Bidders are requested to take note of the same and to submit their offers accordingly.
17.0	The items shall be brand new, unused & of prime quality. Bidder shall warrant (in the event of an order) that the product supplied will be free from all defects & fault in material, workmanship & manufacture and shall be in full conformity with API specification standard. This clause shall be valid for a period of 18 months from date of shipment / dispatch or 12 months from the date of receipt of the items; whichever is earlier. The defective materials, if any, rejected by OIL shall be replaced by the supplier at their own expense. Bidders must confirm the same in their quotations.
18.0	Quantity of Individual item may be increased or decrease at the time of final placement of order. The minimum FOB charges in case of partial order for reduced quantity/enhanced quantity shall have to be indicated by the bidder. In case, this is not indicated specifically, the charges quoted would be pro-rata calculated and the same will be binding on the bidder.
19.0	Any deviation(s) from the tender specification should be clearly highlighted specifying justification in support of deviation.
20.0	<p>The Integrity Pact is applicable against this tender .OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure- IX of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway.</p> <p>OIL's Independent External Monitors at present are as under:</p> <p>SHRI RAJIV MATHUR, IPS (Retd.), Former Director (IB) Govt. of India e-Mail ID : rajivmathur23@gmail.com</p> <p>Shri Rudhra Gangadharan, IAS (Retd.) Ex-Secretary, Ministry of Agriculture E-mail Id : rudhra.gangadharan@gmail.com</p> <p>SHRI JAGMOHAN GARG, Ex-Vigilance Commissioner, CVC e-Mail id : jagmohan.garg@gmail.com</p>

21.0	<b>Original Bid Closing Date shall be considered by OIL for evaluation of BRC Criteria in case of any extension of the original bid closing date.</b>
22.0	<p>Performance Security clause (Clause No. 10.0 of Section-A) of "General Terms &amp; Conditions for Global Tenders (MM/GLOBAL/01/2005)" has been amended and the new clause is detailed in the Amendment dated 25.04.2016 issued to MM/GLOBAL/01/2005. <b>Successful bidder will be required to furnish a Performance Bank Guarantee @10% of the order value which should remain valid for the period execution, including extension, if any and the entire warranty period in line with tender requirement. The successful bidder shall submit Performance Security within 30 days of award, failing which OIL reserves the right to cancel the order and forfeit their Bid Security. Bidders should undertake in their bids to submit Performance Security as stated above. Bidders to note the same and to confirm its acceptance in their offers.</b></p> <p>The Bank Guarantee issued by bank must be routed through SFMS platform as per following details:</p> <p>a. (i) "MT760/ MT760 COV for issuance of bank guarantee (ii) MT767/ MT767 COV for amendment of bank guarantee</p> <p>The above message/intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Duliajan Branch, IFS Code: UTIB0001129. Branch Address: Axis Bank Ltd., Duliajan Branch, Daily Bazar, Jyotinagar, Duliajan, Dist-Dibrugarh, Pin- 786602.</p> <p>b. The vendor shall submit to OIL the copy of the SFMS message as sent by the issuing bank branch along with the original bank guarantee.</p>
23.0	<b>Bidder to sign and submit completely filled up Commercial Check List (Annexure-III), Technical Checklist (Appendix-2) and BRC Evaluation Matrix (Appendix – 3).</b>
24.0	<b>Payment terms:</b> 80% payment will be made against supply of materials and balance 20% after satisfactory installation & commissioning at site along with the training, installation & commissioning charges.
25.0	<b>Liquidated Damage: Refer to “General Terms &amp; Conditions” for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders). In case of deduction of LD, LD amount will be deducted along with applicable rate of GST.</b>
26.0	<p>The items covered by this enquiry shall be used by Oil India Limited in the PEL/ML areas which are issued/renewed after 01/04/99 and hence Nil Customs Duty against CIF valuing INR 5.00 Lakh and above &amp; concessional IGST during import will be applicable.</p> <p>In the event of an order on indigenous bidder, OIL will issue Project Authority Certificate (PAC) under Deemed Export benefit, where import content is declared by the bidder for availing Advance Licence for intermediate Supply. However, Indian bidders will not be issued Recommendatory Letter. Details of Deemed Export benefit are furnished vide Addendum to “General Terms &amp; Conditions” Booklet No. MM/GLOBAL/E-01/2005. The bidders are requested to check the latest position on the subject on their own and OIL shall not accept any liability, whatsoever, on this account.</p>



	<p>Indigenous Supplier shall furnish the invoice to OIL before the dispatch for obtaining Essentiality Certificate from DGH towards concessional rate of GST against invoice valuing INR 1.00 Lakh and above.</p> <p>Supplier shall arrange to provide all necessary documents to apply for the essentiality certificate on receipt of request from OIL, if any. Further, supplier shall affect dispatch only on receipt of relevant certificates from OIL, failing which all related liabilities shall be to Supplier's account.</p>
27.0	Clause not applicable
28.0	<p><b><u>Clauses related to GST:</u></b></p> <ol style="list-style-type: none"> <li>For the purposes of levy and imposition of GST, the expressions shall have the following meanings: <ol style="list-style-type: none"> <li>GST - means any tax imposed on the supply of goods and/or services under GST Law.</li> <li>Cess – means any applicable cess, existing or future on the supply of Goods and Services as per Goods and Services Tax (Compensation to States) Act, 2017.</li> <li>GST Law - means IGST Act 2017, CGST Act 2017, UTGST Act, 2017 and SGST Act, 2017 and all related ancillary Rules and Notifications issued in this regard from time to time.</li> </ol> </li> <li>The rates quoted by the bidders shall be inclusive of all taxes, duties and levies. However, bidders are required to provide separately the rate and amount of all types of taxes, duties and levies. In case, the quoted information related to various taxes, duties &amp; levies subsequently proves wrong, incorrect or misleading, OIL will have no liability to reimburse the difference in the duty/ tax, if the finally assessed amount is on the higher side and OIL will have to right to recover the difference in case the rate of duty/ taxes finally assessed is on the lower side. Further, bidders have to clearly show the amount of GST separately in the Tax Invoices. Further, it is the responsibility of the bidders to make all possible efforts to make their accounting / IT system GST compliant in order to ensure availability of Input Tax Credit (ITC) to Oil India Ltd.</li> <li>Offers without giving any of the details of the taxes (Including rates and amounts) as specified above will be considered as inclusive of all taxes including GST. When a bidder mentions taxes as extra without specifying the rates &amp; amount, the offer will be loaded with maximum value towards taxes received against the tender for comparison purposes. If the bidder emerges as lowest bidder after such loading, in the event of order on that bidder, taxes mentioned by OIL on the Purchase Order/ Contracts will be binding on the bidder.</li> <li>Bidders are required to pass on the benefit arising out of introduction of GST, including seamless flow of Input Tax Credit, reduction in Tax Rate on inputs as well as final goods by way of reduction of price as contemplated in the provision relating to Anti-Profiteering Measure vide Section 171 of the CGST Act, 2017. Accordingly, for supplies made under GST, the bidders should confirm that benefit of lower costs has been passed on to OIL by way of lower prices/taxes and also provide details of the same as applicable. OIL reserves the right to examine such details about costs of inputs/input</li> </ol>

	<p>services of the bidders to ensure that the intended benefits of GST have been passed on to OIL.</p> <p>5. Oil India Ltd. shall declare the value of free issue of materials and services, if any, involved in the execution of the contract. The Contractor should consider the same while working out the GST liability, if any. Further in cases where GST is leviable on any facilities provided by OIL and used by bidders and the consideration for which is recovered by OIL in the form of reduction in the invoice raised by bidders then OIL will raise GST invoices on such transactions and the same will be reimbursed by bidders.</p> <p><b>6. When Input tax credit is available for Set Off</b>  Evaluation of L-1 prices shall be done based on Quoted price after deduction of Input Tax Credit (ITC) of GST, if available to OIL. OIL shall evaluate the offers on the basis of the quoted rates only and any claim subsequently by the bidders for additional payment/liability shall not be admitted and has to be borne by the bidders</p> <p><b>When Input tax credit is NOT available for Set Off</b>  Evaluation of L-1 prices shall be done based on Quoted price only. OIL shall evaluate the offers on the basis of the quoted rates only and any claim subsequently by the bidders for additional payment/liability shall not be admitted and has to be borne by the bidders</p> <p>7. Bidders agree to do all things not limited to providing GST compliant Tax Invoices or other documentation as per GST law relating to the supply of goods and/or services covered in the instant contract like raising of and /or acceptance or rejection of credit notes / debit notes as the case may be, payment of taxes, timely filing of valid statutory Returns for the tax period on the Goods and Service Tax Network (GSTN), submission of general information as and when called for by OIL in the customized format shared by OIL in order to enable OIL to update its database etc. that may be necessary to match the invoices on GSTN common portal and enable OIL to claim input tax credit in relation to any GST payable under this Contract or in respect of any supply under this Contract.</p> <p>8. In case Input Tax Credit of GST is denied or demand is recovered from OIL by the Central / State Authorities on account of any non-compliance by bidders, including non-payment of GST charged and recovered, the Vendor/Supplier/Contractor shall indemnify OIL in respect of all claims of tax, penalty and/or interest, loss, damages, costs, expenses and liability that may arise due to such non-compliance. OIL, at its discretion, may also withhold/recover such disputed amount from the pending payments of the bidders.</p>
29.0	<b>Along with the technical bid, bidders must submit duly filled undertaking as per format enclosed vide Annexure-K as undertaking towards submission of authentic information/documents.</b>
30.0	For convenience of the qualified Bidders and to improve transparency, the rates/costs quoted by bidders against OIL's e-tenders shall be available for online viewing by such Bidders whose price bids are opened by Company. A Bidder can view item-wise rates/ costs of all other such peer bidders against the tender immediately after price bid opening, if the e-tender is floated by Company with PRICE CONDITION. In case the Price-Bid is invited by Company through attachment form under "Notes & Attachment" (i.e., NO PRICE Condition), Bidders must upload their detailed Price-Bid as per the prescribed format under "Notes & Attachment", in addition to filling up the "Total Bid Value" Tab taking

	<p>into account the cost of all individual line items and other applicable charges like freight, tax, duties, levies etc. Under NO PRICE Condition (i.e., Price Bid in attachment form), the "Total Bid Value" as calculated &amp; quoted by the Bidder shall only be shared amongst the eligible bidders and Company will not assume any responsibility whatsoever towards calculation errors/ omissions therein, if any. Notwithstanding to sharing the "Total Bid Value" or the same is whether filled up by the Bidder or not, Company will evaluate the cost details to ascertain the inter-se-ranking of bidders strictly as per the uploaded attachment and Bid Evaluation Criteria only. Online view of prices as above shall be available to the Bidders only upto seven days from the date of Price-Bid opening of the e-tender.</p>
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**BID REJECTION CRITERIA (BRC) / BID EVALUATION CRITERIA (BEC)****(I) BID REJECTION CRITERIA (BRC)**

The bids must conform to the specifications, terms, and conditions given in the Tender. Bids shall be rejected in case the items offered do not conform to the required minimum / maximum parameters stipulated in the technical specifications and to the respective international /national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the following requirements shall have to be particularly met by the bidders, without which the offer will be considered as non-responsive and rejected:

**(A) TECHNICAL :****1.0 EXPERIENCE OF BIDDER****1.1 Experience as a Manufacturer:**

The Bidder should be Manufacturer of Open-Hole Wireline Logging Units. The bidder should satisfy the following clauses and documentary evidence should be enclosed along with the techno-commercial bid:

- a) The Bidder should have minimum 05 (Five) years of experience in manufacturing Open-Hole Wireline Logging unit.
- b) The Bidder should have manufactured and sold minimum 05 (Five) numbers of Open-Hole Wire line Logging Units to various companies which are in the business of 'exploration & production of hydrocarbons' and/or 'Oil Field Service Providers' during the last 05 (Five) years.
- c) The Purchase Orders mentioned above must have been effected to purchasers/ clients based in at least 02 (Two) different countries.

**For clauses (a), (b), & (c) above, the reckoned period shall be the period prior to the **date of original closing** of the techno-commercial bid of this tender.**

- d) Documentary evidence in respect of the above should be submitted with the bid in the form of copies of relevant Purchase Orders along with the following documents:-
  - (i) Dispatch documents (Invoice, Bill of Loading/Consignment, etc.), and
  - (ii) Successful Commissioning Report.
- e) In addition to the above, the bidder shall also furnish certificates/documents (which are to be submitted along with the bid) from at least 02 (Two) of their Customers certifying the satisfactory functioning of the Logging Units and Tools sold to them by the bidder. In case such documents are genuinely of confidential in nature or cannot be shared, then either the CEO or the Company Secretary of that bidding company must give an undertaking to the effect that his company has executed /completed such Orders and the Logging Units/Logging Tools sold by his company are performing to the best of satisfaction of the customers/ clients.
- f) Bids should be from Manufacturer of Open Hole Wireline Logging Units. In case the bidder is not a manufacturer of Open Hole Logging Units, its bid can also be considered provided the Open Hole Wireline Logging Units offered is from Parent

/ Subsidiary / Co-subsidiary of any tier of same Group Company (any such relationship should be on 100% basis) who is a manufacturer of Open Hole Logging Units, provided (i) the bidder submits documentary evidence regarding existence of such a relationship between the Bidder and the Manufacturer, (ii) the Manufacturer authorizes the Bidder to sell their products and services (viz. Installation & Commissioning services, Training services, etc.) mentioned in this tender document and submits a back-up authority letter from the concerned Manufacturer in its techno-commercial bid. However, in such case, the manufacturer (the Parent / Subsidiary / Co-subsidiary company of the bidder) of the offered Open Hole Logging Unit on its own should meet the technical experience clauses as stipulated in the Para 1.1 (a), (b) & (c) above.

## 1.2 **Experience as a Service Provider:**

- a) The bidder must have **minimum of 2 (two) years of experience** in providing Wire-line Logging Services to companies which are in the business of “Exploration & Production of Hydrocarbon” **in India**.
- b) The bidder should have provided Wire-line Logging services to at least **02 (two) different countries other than its country of origin during the last 5 (five) years**.
- c) The bidder must have its base in India with capability to provide immediate support / solutions to the Logging Units / Tools if required by OIL.

\* The above Wireline Logging services provided by the Bidder may be as Parent / Subsidiary / Co-subsidiary of any tier of same Group Company (any such relationship should be on 100% basis).

\* Experience of the bidder, as above, **the reckoned period shall be the period prior to the date of original closing of the techno-commercial bid of this tender**.

- d) **Documentary evidence in respect of the above should be submitted with the bid in the form of copies of relevant Contract Orders along with the following documents:-**
  - (i) **satisfactory completion / performance report,**  
**OR**
  - (ii) **proof of release of Performance Security after completion of the contract,**  
**OR**
  - (iii) **proof of settlement / release of final payment against the contract.**  
**OR**
  - (iii) **documentary evidence in the form of initial and final signed Job Tickets , Service Tickets.**

**2.0 Wherever two or more sets of the same equipment/item are required, the bidders must quote all the sets of the same item that are identical in all respects i.e. the same category of equipments must be of same make, model and compatible in all respects. The bidder must quote accordingly as mentioned in this clause.**

**3.0 Bids with qualifying conditions like “the product is under development and would be supplied by the time ..... etc.,” will be summarily rejected.**

**4.0 Offers of Left-Hand driven (Steering on Left Hand Side inside the driver’s cabin) Logging Truck will be rejected.**

- 5.0 Offers other than **diesel fuel** driven Logging Trucks will be rejected.
- 6.0 **Surface Logging System:** The offered surface logging system must be capable of performing the logging operations and services with the type of tools as described in the **Clause 12.6 to 12.24 of ANNEXTURE-B12** in this document. Bidder must confirm compliance on this point in its bid.
- 7.0 **System Up gradation Capabilities :** The system must have the capacity to be upgraded as mentioned in **clause 12.27 of ANNEXTURE-B14**. System capability for taking up specialized logging surveys through up gradation is mandatory for acceptance of the offer.  
Bidder must confirm compliance on this point in its bid.
- 8.0 **Training and Inspection :** Offer for Training and Inspection should be as per the clauses mentioned in the **ANNEXTURE-C** of this Tender document.
- 9.0 **Delivery :**
- i) Delivery will be essence of the contract. Delivery required against this tender is maximum 12 (Twelve) months from the date of opening of LC in case order is placed on the foreign supplier OR within 12 (Twelve) months from the date of receipt of order in case order is placed on indigenous supplier. Date of clean Bill of Lading (B/L in case of foreign supplier) or Consignment Note date (C/Note date in case of foreign supplier) shall be considered as delivery date.
  - ii) Bidder must comply the above schedule and confirm in their Techno-Commercial bid. Bids not meeting time schedule as mentioned in the tender shall be summarily rejected.
  - iii) In the event of the Seller's default in maintaining the quoted delivery schedule, seller shall be liable to pay liquidated damages @ 0.5% per week or part thereof of the material value of the order subject to a maximum of 7.5%. Liquidated damages amount, if any, shall be adjusted/deducted while processing the balance payment which is payable after commissioning.
- 10.0 **WARRANTY :**  
The bidders should offer a Warranty Period of at least 1 (one) year for the entire equipment supplied starting from the date of completion of successful field commissioning of the entire equipment. Any item / sub-item failed during the warranty period are to be replaced / repaired within **3** (three) months and the warranty for such items should be extended as mentioned in **clause 3.0 of ANNEXTURE-D** of this document. Bidder must confirm compliance on this point in its bid.
- 11.0 **Commitment For Spares Supply:**  
Bidders must submit a written commitment to supply spares and consumables on chargeable basis to OIL for a period of 10 (Ten) years from the date of closing of bids and in the event a part is not available due to a vendor going out of business or some other reason, the bidder will determine and supply a suitable replacement part on chargeable basis to OIL. Bidder must confirm compliance on this point in its bid.
- 12.0 **Installation and Commissioning :**  
Bidders must confirm in their offer that they would carry out installation and commissioning of the logging units and tools and other supplied systems at Duliajan, Assam (India) as per **clause 1.0 of ANNEXURE-D** of the enquiry. Any bidder not offering to the installation and commissioning of all the systems shall be treated as non-responsive and rejected. The bidder must confirm compliance on this point in its bid.

### 13.0 **Deviations from Technical Specifications :**

The bidder must quote as per the tender requirement only and provide FULL INFORMATION wherever applicable in the bid. After opening of the bids, in case any technical clarification is required on any bid, OIL will seek clarification from that bidder and the bidder will have to reply/clarify with complete details within the specified time mentioned by OIL. If not complied, that particular bid will not be considered for further evaluation. **The bidder must respond to each and every clause in the NIT in a tabular form as per APPENDIX – 2.**

### **FINANCIAL CRITERIA :**

- 1.0 **Annual Turnover:** The bidder shall have an annual financial turnover of minimum **US\$ 1,23,18,439.00** or **Rs. 89.05 Crores** during any of the preceding 03 (three) financial years reckoned from the original bid closing date of the tender.
- 1.1 "Net Worth" of the bidder should be positive for the preceding financial/accounting year.
- 2.0 Considering the time required for preparation of Financial Statements, if the last date of preceding financial / accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial / accounting year are not available with the bidder, then the financial turnover of the previous three financial / accounting years excluding the preceding financial / accounting year will be considered. In such cases, the Net worth of the previous financial / accounting year excluding the preceding financial / accounting year will be considered. However, the bidder has to submit an affidavit/undertaking certifying that 'the balance sheet/Financial Statements for the financial year 2018-2019 has actually not been audited so far'.

#### **Note:**

- a) For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the bid:-
  - i) A certificate issued by a practicing Chartered/Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in ANNEXURE.
  - OR
  - ii) Audited Balance Sheet along with Profit & Loss account. In case of Foreign bidders, self-attested/digitally signed printed published accounts are also acceptable
- b) In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidder to provide documentary evidence for the same.
- 3.0 In case the Audited Balance Sheet and Profit & Loss Account submitted along with the bid are in currencies other than INR or US\$, the bidder shall have to convert the figures in equivalent INR or US\$ considering the prevailing conversion rate on the date of Balance Sheet and Profit & Loss Account. A CA certificate is to be submitted by the bidder regarding converted figures in equivalent INR or US\$.

(B) **COMMERCIAL :**

Commercial Bid Rejection Criteria will be as per Section D of General Terms & Conditions of Global Tender (MM/GLOBAL/E-01/2005) with following Special Bid Rejection Criteria:

- 1.0 Bids are invited under **Single Stage Two Bid System**. Bidders shall quote accordingly under Single Stage Two Bid System. **Please note that no price details should be furnished in the Techno-Commercial Unpriced Bid.** The “Unpriced Bid” shall contain all techno-commercial details except the prices which shall be kept blank. The “Priced Bid” must contain the price schedule and the bidder’s commercial terms and conditions.  
Any offer not complying with above submission procedure will be summarily rejected.
- 2.0 Bid security of **US \$ 1, 54,320.00 or Rs. 1,11,55,700.00** shall be furnished as a part of the **Techno-Commercial Unpriced Bid. Any bid not accompanied by a proper bid security in ORIGINAL will be rejected without any further consideration.** The Bid Security shall be valid for one year from the date of bid opening.  
  
For exemption for submission of Bid Security, please refer Clause No. 9.8 (Section A) of “General Terms & Conditions” for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders).
- 3.0 Validity of the bid shall be minimum 120 days from the original bid closing date. Bids with lesser validity will be straightway rejected.
- 4.0 Successful bidder will be required to furnish a Performance Bank Guarantee @ 10% of the order value. The Performance Bank Guarantee must be valid for one year from the date of successful commissioning of the equipment. Bidder must confirm the same in their Techno-Commercial Unpriced Bid. Offers not complying with this clause will be rejected.
- 5.0 Bidders must confirm that Goods, materials or plants(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a minimum period of twelve months from the date of successful completion of field commissioning of the Units at site at Duliajan, Assam (India) against any defects arising from faulty materials, workmanship or design. Defective goods/materials or any item / sub-item failed during the warranty period notified by OIL is to be replaced / repaired within 3 (three) months on FOR Duliajan basis at no extra cost to OIL and warranty for such items should be extended as mentioned in the **clause 3.0 of ANNEXTURE-D** of this document. This guarantee shall survive and hold good notwithstanding inspection, payment for and acceptance of the goods.
- 6.0 The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.
- 7.0 Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.
- 8.0 Bidders shall quote directly and not through Agents in India. Offers made by Indian Agents on behalf of their foreign principals will be rejected. Similarly offers from unsolicited bidders will be rejected.



9.0 Bids containing incorrect statement will be rejected.

**10.0 Bidders are required to submit the summary of the prices in their Priced Bid as per bid format (Summary), given below:**

**(i) Price Bid Format ( SUMMARY ) for Foreign Bidders :**

1 A)	Cost of items covered under <b>ANNEXURE-A and ANNEXURE-B except Clause No. 12.25 (ANNEXURE-B12)</b>
B)	Cost of spares, accessories, consumables, PCBs and Panels etc. as per <b>Clause Nos. 12.30.1 through 12.30.13 of ANNEXURE-B17</b>
C)	Cost of commissioning spares, if any
D)	Pre-Despatch/shipment Inspection Charges as per <b>Clause No. 2 of ANNEXURE-C</b> , If any
E)	Total cost of the unit (1A+1B+1C+1D)
2	Total cost for 2 units
3 A)	Packing, FCA (Gateway airport) Charges for Explosives, RA Sources and perishable consumable as per <b>Clause No. 12.30.16 of ANNEXTURE-B18</b>
B)	Packing & FOB (seaport) charges for Remaining items
4	<b>Total FOB/FCA port/airport value, ( 2 + 3A + 3B) above</b>
5 A)	Air Freight charges for Explosives, RA Sources and perishable consumable as per <b>Clause No. 12.30.16 of ANNEXTURE-B18</b> upto Kolkata, India
B)	Ocean Freight Charges for Remaining items upto Kolkata, India
6	Insurance Charges @ 0.5 % of Total FOB Value vide (4) above
7	Banking Charges @ 1% of Total FOB Value vide (4) above in case of payment through Letter of Credit. If confirmed L/C at buyer's account is required, 1.5% of Total FOB Value will be loaded )
8	<b>CIF Value (4+5A +5B+6+7)</b>
9	Landing Charges <b>(Not applicable)</b>
10	<b>CIF Landed Value (8+9)</b>
11	Basic Custom Duty on (10)
12	<b>CIF +CD Landed Value (10+11)</b>
13	IGST (including cess, if any) on (12)
14	Compensatory Cess on 13, If any
15	<b>CIF +CD+GST Landed Value (12+13+14)</b>
16	Training charges at bidder's works as per <b>Clause No. 1.0 ANNEXURE-C</b> , If any
17	GST on Training Charges
18	Installation and commissioning Charges for both the unit as per <b>Clause No. 1.0 ANNEXURE-D</b> , if any
19	GST on Installation & Commissioning Charges
20	<b>Total Value (15+16+17+18+19)</b>
21	Total Value in words :
22	Gross Weight :
23	Gross Volume :

(ii) **Price Bid Format ( SUMMARY ) for Indigenous Bidders :**

1 A)	Cost of items covered under <b>ANNEXURE-A and ANNEXURE-B except Clause No. 12.25 (ANNEXURE-B12)</b>
B)	Cost of spares, accessories, consumables, PCBs and Panels etc. as per <b>Clause Nos. 12.30.1 through 12.30.13 of ANNEXURE-B17</b>
C)	Cost of commissioning spares, if any
D)	Pre-Despatch/shipment Inspection Charges as per <b>Clause No. 2 of ANNEXURE-C</b> , If any
E	Total cost of the unit (1A+1B+1C+1D)
2	Total cost for 2 units
3	Packing & Forwarding Charges, if any
4	<b>Total Ex works Value (2+3)</b>
5	GST on (4)
6	Compensatory Cess, If any
7	<b>Total FOR Despatching Station value(4+5+6)</b>
8	Inland freight Charges upto Duliajan, Assam
9	GST on (8)
10	Insurance Charges @ 0.5 % of (7)
11	Training charges at bidder's works as per <b>Clause No. 1.0 ANNEXURE-C</b> , If any
12	GST on Training Charges
13	Installation and commissioning Charges for both the unit as per <b>Clause No. 1.0 ANNEXURE-D</b> , if any
14	GST on Installation & Commissioning Charges
15	<b>Total FOR Duliajan Value (7+8+9+10+11+12+13+14)</b>
16	Total Value in words :
17	Gross Weight :
18	Gross Volume :
19	Import Content, if any

11.0 Bidder shall accept and comply with the following clauses as given in the Bid Document, failing which bid shall be liable for rejection:

- i) Liquidated Damages
- ii) Warranty/Guarantee of material
- iii) Arbitration / Resolution of Dispute
- iv) Force Majeure
- v) Applicable Laws

**NOTES :**

1. Cost of the individual items should be shown separately.
2. Details of the Commissioning Spares indicating the qty, description and unit prices must be shown separately.
3. The total FCA charges and FCA value of the items to be air freighted should be shown separately indicating the Gateway airport. Similarly for the items which are to be sea freighted, the FOB charges and FOB value should be indicated.
4. The items covered under this enquiry shall be used by OIL in PEL/ML areas which are issued/renewed after 01.04.99 and hence, applicable Customs Duty for

import of goods shall be ZERO. However, IGST @ %5 shall be applicable. IGST @ 5% shall be applicable for Indigenous bidders also under deemed export benefit.

5. Banking charges in the country of the foreign bidder shall be borne by the bidder.
6. Successful bidder shall offer the Logging Unit for Pre-despatch/shipment Inspection by OIL's team of technical/commercial executives. Pre-despatch/Shipment Inspection charges, if any, must be quoted separately on lumpsum basis which shall be considered for evaluation of the offers. The to and fro fares, boarding/lodging and other enroute expenses of OIL's Engineers shall be borne by OIL.
7. Training charges (as per ANNEXURE - C), if any must be quoted separately on lumpsum basis which shall be considered for evaluation of the offers. Training charges at OIL's premises should include amongst others to and fro fares, boarding/lodging, local transport at Duliajan and other expenses of supplier's training personnel during their stay at Duliajan, Assam(India). In case of training at Bidder's premises, to and fro fares, boarding/lodging and other en-route expenses of OIL's personnel shall be borne by OIL.
8. Installation/Commissioning charges (as per ANNEXURE - D) must be quoted separately on lumpsum basis which shall be considered for evaluation of the offers. These charges should include amongst others to and fro fares, boarding/lodging, local transport at Duliajan and other expenses of supplier's commissioning personnel during their stay at Duliajan, Assam (India).
9. Bidders must categorically indicate Pre-despatch/Shipment Inspection, Training and Installation / Commissioning charges in their offers and must confirm providing the same in their Techno-Commercial un-priced bids.
10. All Income, GST, Corporate, Personal Taxes etc. towards the services provided under installation / Commissioning and Training shall be borne by the supplier and will be deducted at source at the time of releasing the payment.
- 11.0 **Offers should be submitted with Integrity Pact duly signed by the authorized signatory of the bidder. If any bidder refuses to sign Integrity Pact or declined to submit Integrity Pact with the offer, their bid shall be rejected straightway.**

**(II) BID EVALUATION CRITERIA (BEC) :**

**The Bids conforming to the specifications, terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria mentioned below:**

**(A) TECHNICAL:**

All materials as indicated in the material description of the tender should be offered. If any of the items are not offered by the bidder, the offer will not be considered for evaluation.

Delivery required against this tender is maximum 12 (TWELVE) months from the date of opening of LC in case order is placed on the foreign supplier OR within 12 (TWELVE) months from the date of receipt of PO in case order is placed on indigenous supplier.

Immediately after receipt of all the materials by OIL at Duliajan, a written advice will be issued to the supplier asking them to commence installation and commissioning, which must be promptly acknowledged by the supplier. Commissioning of the LOGGING UNITS along with the entire tool and other accessories is to be completed within 04 (Four) month from the date of receipt of such an advice from OIL (this four months period excludes the waiting time for well readiness).

**1.0 SPARES AND CONSUMABLES :**

- 1.1 Cost of spares, explosives, consumables, critical items and accessories, panels, PCBs etc. as mentioned in clause 12.30.1 through 12.30.9 of ANNEXURE- B17 will be considered for Bid evaluation.
- 1.2 Explosives, Radio-Active sources and perishable consumables like paper, film etc., are to be Air Freight up to Kolkata, India and accordingly air freighted charges for these items shall be considered for evaluation.
- 1.3 Bid evaluation will be done only for those bids which offer full quantities of goods as mentioned in the ANNEXURE- A through D.

**(B) COMMERCIAL:**

- 1.0 The evaluation of bids will be done as per the Price Schedule (SUMMARY) detailed vide Para 10.0 of BRC above.
- 2.0 If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.
- 3.0 For conversion of foreign currency into Indian currency, B.C. selling (Market) rate declared by State Bank of India, one day prior to the date of price bid opening shall be considered. However, if the time lag between the opening of the bids and final decision exceed 3(three) months, then B.C. Selling(Market) rate of exchange declared by SBI on the date prior to the date of final decision shall be adopted for conversion and evaluation.
- 4.0 To ascertain the inter-se-ranking, the comparison of the responsive bids will be made as under, subject to corrections / adjustments given herein.
  - i) When only foreign bidders are involved: Comparison will be done on Total value vide Sl no 20 of 6 (i) of BRC Commercial
  - ii) When both foreign & Domestic bidders are involved: Comparison will be done on total value vide Sl no 20 of 6 (i) of BRC Commercial of foreign bidder and total value vide Sl no 15(excluding Sl no 8,9 & 10) of 6 (ii) of domestic bidder
  - iii) When only domestic bidders are involved: Comparison will be done on Total value vide Sl no 15 of 6 (ii) of BRC Commercial of Domestic bidder
  - iv) Domestic bidders must quote inland freight charges upto Duliajan. In case bidder fails to quote inland freight charges, highest freight quoted by domestic bidder against this tender shall be loaded to their offer for comparison purpose
  - v) The items covered under this enquiry shall be used by OIL in the PEL/ML areas issued/renewed after 01/04/99 and hence, applicable Customs Duty for import of goods shall be ZERO. However, IGST @ 5% shall be applicable. IGST @ 5% shall be applicable for Indigenous bidders also under deemed export benefit.

Note: If the Government of India revises these evaluation criteria the same as applicable on the bid closing date will be adopted for evaluation of the offers.

- 5.0 Other terms and conditions of the enquiry shall be as per General Terms and Conditions for Global Tender. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) mentioned here contradict the Clauses in the General Terms & Conditions of Global Tender of the tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.

**CHECK LIST**

THE CHECK LIST MUST BE COMPLETED AND RETURNED WITH YOUR OFFER. PLEASE ENSURE THAT ALL THESE POINTS ARE COVERED IN YOUR OFFER. THESE WILL ENSURE THAT YOUR OFFER IS PROPERLY EVALUATED. PLEASE SELECT "Yes" OR "No" TO THE FOLLOWING QUESTIONS, IN THE RIGHT HAND COLUMN.

**A.COMMERCIAL CHECK-LIST**

Sl#	REQUIREMENT	COMPLIANCE
1.0	Whether bid submitted under Single Stage Two Bid System?	Yes / No
2.0	Whether quoted as manufacturer?	Yes / No
2.1	Whether quoted as OEM Dealer / Supply House. To Specify-	Yes / No
2.2	If quoted as OEM Dealer / Supply House	Yes / No
	(a) Whether submitted valid and proper authorization letter from manufacturer confirming that bidder is their authorized Dealer / supply House for the product offered ?	
	(b) Whether manufacturer's back-up Warranty/Guarantee certificate submitted?	
3.0	Whether ORIGINAL Bid Bond (not copy of Bid Bond) as per Revised Format(Annexure VII Revised) Sent separately? If YES, provide details	Yes / No
	(a) Amount :	
	(b) Name of issuing Bank :	
	(c) Validity of Bid Bond :	
4.0	Whether offered firm prices ?	Yes / No
4.1	Whether quoted offer validity of 120 days from the bid closing date of tender?	Yes / No
4.2	Whether quoted a firm delivery period?	Yes / No
4.3	Whether agreed to the NIT Warranty clause?	Yes / No
4.4	Whether confirmed acceptance of tender Payment Terms of 80% payment will be made against supply of materials and balance 20% after satisfactory installation & commissioning at site along with the training, installation & commissioning charges?	Yes / No
5.0	Whether confirmed to submit PBG as asked for in NIT?	Yes / No
5.1	Whether agreed to submit PBG within 30 days of placement of order?	Yes / No
6.0	Whether Price submitted as per Price Schedule (refer Para 12.0 of BRC vide Annexure – II)?	Yes / No
6.1	Whether cost of Recommended Spares for 2 years of operations quoted?	Yes / No
7.0	Whether quoted as per NIT (without any deviations)?	Yes / No
7.0	Whether quoted any deviation?	Yes / No
7.1	Whether deviation separately highlighted?	Yes / No
8.0	Whether indicated the country of origin for the items quoted?	Yes / No
8.1	Whether technical literature / catalogue enclosed?	Yes / No
8.2	Whether weight & volume of items offered indicated?	Yes / No

9.0	For Foreign Bidders - Whether offered FOB / FCA port of despatch including sea / air worthy packing & forwarding?	Yes / No
9.1	For Foreign Bidders – Whether port of shipment indicated. To specify:	Yes / No
9.2	For Foreign Bidders only - Whether indicated ocean freight up to Kolkata port (Excluding marine insurance ) ?	Yes / No
9.3	Whether Indian Agent applicable ?	Yes / No
	If YES, whether following details of Indian Agent provided?	
	(a) Name & address of the agent in India – To indicate	
	(b) Amount of agency commission – To indicate	
	(c) Whether agency commission included in quoted material value?	
10.0	For Indian Bidders – Whether indicated the place from where the goods will be dispatched. To specify :	Yes / No
10.1	For Indian Bidders – Whether road transportation charges up to Duliajan quoted?	Yes / No
10.2	For Indian Bidders only - Whether offered Ex-works price including packing/forwarding charges?	Yes / No
10.3	For Indian Bidders only - Whether indicated import content in the offer?	Yes / No
10.4	For Indian Bidders only - Whether offered <b>Deemed Export prices?</b>	Yes / No
10.5	For Indian Bidders only – Whether all applicable Taxes & Duties have been quoted?	Yes / No
11.0	Whether all BRC/BEC clauses accepted ?	Yes / No
12.0	Whether Integrity Pact with digital signature uploaded?	Yes / No
12.1	Whether all the clauses in the Integrity Pact have been accepted?	Yes / No
13	Whether all Financial documents as per BRC Financial have been uploaded?	Yes / No
14	Whether BRC Evaluation Matrix ( <b>Appendix-3</b> ) submitted?	Yes / No

**B. TO BE FILLED UP IN DETAIL:**

Sl No	Requirement	Bidder's Reply
01	Make and Model of the Items	
02	Bid validity	
03	Payment Terms	
04	Guarantee/Warranty Terms	
05	Delivery Period	

08	Port of Despatch / Despatching Station	
09	Confirm submission PBG, if required as per NIT	
10	Compliance to: a) Liquidated Damage b) Warranty/Guarantee c) Arbitration/Resolution of Dispute d) Force Majeure e) Applicable laws	
11	Exception/Deviations quoted, if any, to be given in details or refer to respective page of the bid documents	

*Signature* \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_



**CERTIFICATE OF ANNUAL TURNOVER & NET WORTH**TO BE ISSUED BY PRACTISING **CHARTARD ACCOUNTANTS' FIRM** ON THEIR LETTER HEAD**TO WHOM IT MAY CONCERN**

This is to certify that the following financial positions extracted from the audited financial statements of M/s.....(Name of the bidder) for the last three (3) completed accounting years upto..... **(as the case may be)** are correct

<b>YEAR</b>	<b>TURN OVER</b> <b>In INR (Rs.) Crores/ US \$</b> <b>Million) *</b>	<b>NET WORTH</b> <b>In INR (Rs.) Crores / US \$</b> <b>Million ) *</b>

\*Rate of conversion (if used any): USD 1.00 = INR .....

Place:

Date:

Seal

Membership No:

Registration Code:

Signature

**\*Applicable only for GLOBAL tenders**

**NO DEVIATION CONFIRMATION**

Ref. No. \_\_\_\_\_ Date: \_\_\_\_\_

From: \_\_\_\_\_ (Insert name and address of Bidding Entity)

Tel.: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**To**

GM (MATERIALS)

MATERIALS DEPARTMENT

OIL INDIA LIMITED

DULIAJAN

District : DIBRUGARH (Assam)

PIN 786602

**Sub:** Bid for “ \_\_\_\_\_ ”

**Tender No :** \_\_\_\_\_

**Dear Sir,**

We understand that any 'deviation / exception' in any form may result in rejection of Bid. We, therefore, certify that we have not taken any 'exception / deviation' anywhere in the Bid and we agree that if any 'deviation / exception' is mentioned or noticed, our Bid may be rejected.

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

**Format of undertaking by Bidders towards submission of authentic information/documents  
(To be typed on the letter head of the bidder)**

Ref. No. \_\_\_\_\_

Date \_\_\_\_\_

**Sub: Undertaking of authenticity of information/documents submitted**

**Ref: Your tender No. \_\_\_\_\_ Dated \_\_\_\_\_**

To,  
The HOD-Materials  
Materials Deptt,  
OIL, Duliajan

**Sir,**

With reference to our quotation against your above-referred tender, we hereby undertake that no fraudulent information/documents have been submitted by us.

We take full responsibility for the submission of authentic information/documents against the above cited bid.

We also agree that, during any stage of the tender/contract agreement, in case any of the information/documents submitted by us are found to be false/forged/fraudulent, OIL has right to reject our bid at any stage including forfeiture of our EMD and/or PBG and/or cancel the award of contract and/or carry out any other penal action on us, as deemed fit.

Yours faithfully,  
For (type name of the firm here)

Signature of Authorised Signatory

Name :

Designation :

Phone No.

Place :

Date :

(Affix Seal of the Organization here, if applicable)

**\*\*\*\*\* END OF THE DOCUMENT\*\*\*\*\***

## **TECHNICAL SPECIFICATIONS FOR 02 (TWO) NOS. OPEN HOLE LOGGING UNIT**

### **AUTOMOBILE AND HYDRAULIC SECTION**

The Logging units should be ergonomically designed, heavy duty type logging unit to be used in rough terrain, typical oil field roads and desert environment. The bidders should confirm that the offered model will be suitable for mounting complete logging cabin with all requisite hydraulic, pneumatic systems, tool racks etc. with documentary evidence. Complete specifications along with drawings, catalogues etc. are to be provided. The model offered should be state-of-art and conform to international quality standard norms.

#### **1.0 TRUCK CHASSIS:**

The Truck chassis shall be of **Make: Kenworth / International / Peterbilt / Volvo / Mercedes-Benz/ MOL CY NV** having specifications, fitments, accessories etc. mentioned in the tender.

**Note: The Technical leaflets/brochure of the offered model truck chassis shall be submitted along with bid.**

#### **1.1 DIMENSIONS (COMPLETE UNIT WITH LOGGING CABIN):**

- a. Overall Width: Not more than 2.8 meter (approx.).
- b. Overall Height: Within 4 meter (approx.) from ground level.
- c. Overall Length: Within 11 meter (approx.).
- d. Ground Clearance: Ground clearance shall be as per OEM of the offered Truck, preferably not less than 25 cm. For operational convenience, the add-on equipment i.e. subsequently mounted components on the original chassis should be mounted at height preferably not less than 45 cm from ground level. It shall be bidder's endeavour to mount subsequently fitted undercarriage components (i.e. other than originally mounted components) at maximum possible height to avoid hitting/fouling while moving on uneven roads.
- e. Total Laden Weight i.e Total mass: Within 30000 Kg.

Total laden weight i.e total mass is the weight of the complete unit with all equipment & fittings i.e. total of weight of the Truck with Driver's cabin etc., weight of well logging cabin, rear cabin and all logging equipment like Drums, Cables etc. that are permanently mounted on the unit, weight of other tools, accessories, items, pumps, motors, hoses etc. that are generally being mounted, carried & kept in the unit, spare wheel, hydraulic oil, diesel etc. Total laden weight i.e total mass of the complete unit must be within the permissible Gross Vehicle Weight of the offered Truck. The bidder shall clearly mention the permissible Gross Vehicle Weight of the offered Truck and total laden weight (i.e total mass) of the complete unit.

f. The bidder shall submit GA (General Arrangement) drawing of the complete unit along with the Truck, logging cabin & rear cabin showing the major dimensions of the complete unit along with the technical bid.

## 1.2 ENGINE:

Water cooled, diesel fuel Engine developing approximately 400-480 HP at rated RPM suitable for road drive of the Truck as well as logging operation up to a depth of 6500 meter. The bidder must offer engine of Make: Caterpillar / Cummins / International / Volvo / Mercedes-Benz.

## 1.3 EMISSION NORMS:

As per notification issued by the Government of India, the applicable emission norms for vehicles in India shall be **BS-VI (Bharat Stage-VI)/ EURO-VI** with effect from 1<sup>st</sup> April, 2020. Hence, the offered Trucks shall have to comply with the emission norms **BS-VI (Bharat Stage-VI)/ EURO-VI**. The units shall be equipped with an On-Board Diagnostic system conforming to relevant OBD norms, as applicable.

## 1.4 TRANSMISSION:

Suitable model of **fully automatic / automated transmission** having forward gears, neutral & reverse gear(s) with suitable shifter and without clutch pedal as supplied with chassis by the OEM of the offered Truck shall be provided for both road drive of the Truck and logging operation. The offered Transmission shall be compatible with the Engine. Suitable PTOs/transfer case/drivelines etc. as per design / requirement shall be provided. The make and model of the offered transmission, transfer case (if any), PTOs etc. shall be clearly mentioned in the technical bid with supporting technical leaflets.

Manual Transmission with clutch pedal is not acceptable.

The bidder(s) shall submit the mechanical power flow block diagram for both road drive & logging operation indicating the major components along with the technical bid.

## 1.5 DRIVE

**Drive:** 6 x 6 Drive. All powered axles, however, normal drive shall be under 6 x 4 option and there shall be provision to shift to 6 x 6 drive option as & when required.

## 1.6 STEERING:

Hydraulic power assisted steering, **right hand driven Truck (i.e. Steering wheel shall be on right hand side inside the Driver's cabin when viewed from rear of the Truck)**. Left hand driven Truck (i.e Steering wheel on left hand side inside the Driver's cabin when viewed from rear of the Truck) is not acceptable.

Minimum turning circle (MTC) radius not more than 18 meters.

## **1.7 SUSPENSION:**

- a. **Front suspension:** Heavy duty multi-leaf spring suspension of suitable design. Air/Hydraulic suspension at front is not acceptable.
- b. **Rear Suspension:** Preferably heavy duty Rocker Beam (Walking Beam) suspension with auxiliary leaf springs or air cushion support/Bogie suspension system of suitable design as per design load. The bidder shall clearly mention the Make & Model of the offered rear suspension and submit the technical leaflet/brochure with technical details of the offered rear suspension in the technical bid. Hydraulic suspension will not be accepted.

## **1.8 AXLES:**

- a. **Front Axle:** Steer axle as per design. The bidder shall clearly mention the Make & Model, axle capacity, axle loading of the offered front axle and submit the technical leaflet/brochure with technical details of the offered front axle in the technical bid.
- b. **Rear Axles:** As per design. The bidder shall clearly mention the Make & Model, axle capacity, axle loading of the offered rear axles and submit the technical leaflet/brochure with technical details of the offered rear axles in the technical bid. Rear axles shall have differential lock facility.
- c. Actual loading on each individual axle (all front and rear) shall be within maximum load bearing capacity of the respective axle.

## **1.9 WHEELS & RIMS:**

Wheels (Total- 02 Nos. at Front Axle, Total- 08 Nos. at Rear Axles) with Tube & Tyre of adequate ply rating are to be provided. The bidder shall clearly mention the Tyre size of both front wheels and rear wheel etc. in the technical bid.

Two Nos. of complete spare wheel assembly (Rim, Tyre with Tube, flap etc.) for front and rear wheels are to be provided even in case of same front and rear wheels along with each truck. Suitable lifting and mounting arrangement facility for the spare wheel shall be provided in the vehicle. Single giant tyre(s) are not acceptable.

## **1.10 BRAKE:**

- a. Service Brake: Foot pedal operated, Multiple Circuit Pneumatic brake acting on all wheels with ABS.
- b. Parking/Emergency Brakes: Hand Operated Parking Brake. It shall automatically get engaged in the event of low/no air pressure.
- c. Buzzer warning for low air pressure is to be provided.

## **1.11 FUEL TANK:**

The fuel tank shall be of adequate capacity to cater fuel demand for at least 30 hours of continuous full load logging operation. Suitable strainer at the opening of the tank to prevent entry of foreign materials and locking arrangement shall be provided. The bidder shall clearly mention the capacity of the fuel tank(s), number of fuel tank fitted in their offered truck in the technical bid.

### 1.12 DRIVER'S CABIN:

Originally built & supplied with chassis by chassis manufacturer, ergonomically designed Steel/Aluminium Driver's cabin complete with all standard fittings/accessories. The driver's cabin shall have seating capacity minimum 02 (two) Nos. including the Driver. The driver's seat & co-driver's seat should be comfortable and ergonomically designed with adjustable mechanism and seat belts. The bidder shall clearly mention the seating capacity in the Driver's cabin.

### 1.13 OTHER FITTINGS AND ACCESSORIES: Following fittings and accessories are to be provided in the vehicle:

- a. Since the truck(s) will be driven on roads in India having traffic rules for Right Hand Drive vehicles only, headlamps (photometry of the headlamps to suit "keep-left" traffic), sufficient and suitable side, repeater & top marker lights, hazard warning lights, direction indicator lights, stop lamps, parking lamps, rear and side reflectors, rear view mirrors at both sides etc. as well as Air Horn in addition to Electric Horn shall be provided for safe road movement of the units. All lights shall be covered to the extent possible with suitable guard to prevent damage, all electrical fittings, components & connections shall be suitable to operate in hazardous oilfield area. If feasible, lateral/side under run protection device (SUPD)s, front under run protection device (FUPD), rear under run protection device (RUPD) shall be fitted in the units.
- b. All gauges & meters including Engine Tachometer & Hour Meter as per standard inside the driver's cabin are to be provided. **The vehicle shall have Speedometer indicating speed in Kilometers per hour and Odometer shall have Kilometer calibration system.** It shall be bidder's endeavour to provide the Engine Oil Pressure & Temperature meters, Air Pressure Meter, Transmission Oil Pressure & Temperature meters (if any) with high-low warning buzzers in dash board. In addition, similar types of Engine Oil Pressure & Temperature meters, Engine Tachometer as well as Transmission Oil Pressure & Temperature meters (if any) shall be provided inside the logging cabin. The temperature gauge should have centigrade scale.
- c. Suitable reversing audio alarm with blinker lights are to be provided in each unit. Rear view camera with display inside the Driver's compartment shall be fitted in each Truck for clear rear view by the Driver while reversing the unit. Two Nos. of flood lights in suitable location for night operation are to be fitted in each unit.
- d. Well-covered and non-conducting material wrapped vertical exhaust located behind and projected above the top of the driver's cabin with Spark Arrestor suitable to operate in hazardous oilfield area are to be provided.
- e. Suitable heavy-duty Towing Hooks both at front and rear capable of pulling/towing the unit from bogged down situation in slushy areas in oil fields from front as well as rear are to be provided in each unit.
- f. Suitable electrical master switch to engage/disengage all electrical circuits from battery is to be provided in each unit.
- g. Well covered Battery box, Standard Tool Kit (list to be submitted along with technical bid) in a portable box for general maintenance of the Truck, heavy duty Grease gun 01 No., Wheel Wrench

for both front and rear wheels with Handle, 02(two) Nos. minimum 30 MT capacity hydraulic jack with handle, 02 (two) Nos. metallic stopper Block for rear wheels to prevent accidental movement of unit while in stationary position shall be supplied along with each unit. In case the wheel nuts at front and rear are of different size, then separate Wheel Wrench & Handle for both front & rear shall be supplied along with each unit.

- h. Suitable 02(two) Nos. jack with support plates at rear end of the chassis/body to level the Truck in slushy ground are to be provided.
- i. Fire Extinguisher and First Aid Box etc. are to be provided as per standard inside the driver's cabin for the each unit.
- j. To fix retro reflective tape (3m make, 50 mm width or equivalent make) on the front, rear and both side of the cabin as per the colour code- Front: White, Rear: Red and Sides: Yellow.
- k. The Truck(s) is to be fitted with Speed Limiting Device (SLD) & its accessories. The maximum road speed of the Truck with Speed Limiting Device shall be 50 Km/hour without affecting the other performance parameters of the Truck in any manner. The speed limitation function shall not actuate the Truck's service braking system. The Speed Limiting Device shall be fail safe and so designed to act on road drive only and it must not interfere the logging operations any way. The set speed shall be indicated on a plate in a conspicuous position in the Driver's compartment of the vehicle. Necessary certification/documentation from appropriate authority regarding the speed limitation function or the SLD is to be accompanied along with the supply. The supplier may fit the Speed Limiting Device (SLD) after arrival of the unit in India, however, the availability & compatibility should be ensured by the bidder.
- l. Vehicle(s) shall be fitted with Global positioning System (GPS). Necessary certification/documentation from appropriate authority regarding the Global positioning System (GPS) is to be accompanied along with the supply. The supplier may fit the Global positioning System (GPS) after arrival of the unit in India.
- m. The Truck shall preferably have Air Bags for Driver and the Co-driver.

## **2.0 HYDRAULIC SYSTEM FOR LOGGING OPERATION:**

The hydraulic system for logging operation shall be as per manufacture's design. However, the design shall ensure that the brakes of winch drums remain engaged until and unless the drums are selected for operation or the brakes are released. All hydraulic hoses shall be properly marked (at both the ends) for easy identification during maintenance/replacement. Additionally, fully pneumatic brakes for both the drums to be provided with hand operated lever located inside the Logging cabin near the operator's console

## **3.0 MAKES & MODELS OF MAJOR COMPONENTS:**

It shall be bidder's endeavour to offer the following items as per Makes indicated against each item (other suitable makes & models are however equally acceptable in case of operational and/or design requirements supplemented with proper justification).

- a. Hydraulic Pump & Motors : Rexroth / Parker / Eaton / Sauer Danfoss.
- b. Transfer Case (if any) : Fabco/ Volvo / Mercedes-Benz / MAN.



- c. Torque Hub : Fairfield.
- d. Tyre Size (Truck): Front- 425/65 R22.5 or 315/80R-22.5 or 295/75R 22.5  
Rear- 11.00 R 22.5 or 295/75R 22.5 or 295/80R 22.5  
or available Indian Make Tyres of size: Front- 14.00X20 or Rear-12.00X20 of  
suitable ply rating for both front & rear.
- e. Hydraulic hoses to be used shall be of Make: Parker / Gates / Eaton / Power Grip.

#### **4.0 MANUALS & CATALOGUES:**

The following Manuals & Catalogue in printed form in English Language shall be supplied along with the units in addition to supply of the same in compact disc (CD) format. Supply of the manuals/catalogues only in compact disc format is not acceptable. Similarly, all the manuals & catalogues shall contain only those components/systems that have been used in the units i.e. the same must be CUSTOM ILLUSTRATED MANUALS/ CATALOGUES ONLY – not the generalized ones. COMMISSIONING OF THE UNIT SHALL NOT BE CONSIDERED AS COMPLETE UNTIL & UNLESS ALL THE PRINTED MANUALS/CATALOGUES ARE SUPPLIED.

- a. 03(three) sets of printed Spare Parts Catalogue with Part Numbers and Workshop & Service Manual in English Language for all components/systems of the Truck chassis like Engine, Transmissions, PTOs, steering system, axles, brake, suspension, electrical & pneumatic systems etc. with complete schematics of electrical, pneumatic circuits.
- b. 03(three) sets of printed Spare Parts Catalogue with Part Numbers and Workshop & Service Manual in English Language for all components/systems of the hydraulic systems for logging operation like hydraulic pumps, motors, winch drums, torque hub of winch drums, spooler arm, electrical/electronic control system of hydraulic operations, control panel circuitry etc. complete with all pneumatic / hydraulic schematics (circuits) showing and labelling all components including hoses/pipes. Above shall be complete with functional logic explanation.
- c. Part wise vendor/ manufacturers' lists are to be provided along with the supply.

#### **5.0 SPARE PARTS:**

All spares in specified quantity as indicated in the Automobile Spare Parts List vide **Para-7.0(A1) - Annexure-A1 below** shall be supplied along with the units. Specific description, Part Numbers, Make and Quantity etc. of each and every item (spare) shall clearly be indicated in the bid.

#### **6.0 BID SUBMISSION & DOCUMENTATIONS:**

Bidder's response to all NIT stipulations should clearly be defined. Bidder shall furnish specific details/specifications of all major components, systems with Make & Model etc. Generalized response like - 'As per NIT Specifications/Technical Leaflet', 'Noted', 'Accepted' or in any similar fashion is not encouraged.

##### **6.1 The following documents shall be submitted along with the bid:**

- a. Technical leaflets with detailed specifications, Make & Model of Truck chassis, Engine, Transmission, power take off (PTO) unit, transfer case (if any), axles, suspensions system, steering system, wheel & rim, brake, etc.
- b. Detailed dimensional layout drawing/s illustrating Driver's Cabin, Logging Cabin, Rear Cabin and all major items/components.
- c. Technical leaflets with detailed specification, Make & Model of all hydraulic pumps, motors, torque hub of winch drums, brake mechanism of winch drums etc.
- d. The bidder(s) shall submit the mechanical power flow block diagram for both road drive & logging operation indicating the major components along with the technical bid.
- e. List of tools that shall be supplied under Standard Tool Kit for general maintenance of the truck [Ref. Para-1.13 (g)].
- f. Specific description, Part Nos., Make, Quantity, UoM etc. of each and every spare as detailed in the Spare Parts List [Ref. Para-7.0 (A1)- Annexure-A1] provided in the NIT. **These shall be considered for bid evaluation and the prices shall only be quoted in the price bid.**
- g. List of additional spares, if any, for 02(two) year maintenance as felt necessary but not covered in the Spare Parts List provided in the NIT with Description, Part Nos., Make etc. **for future reference/procurement only, not for bid evaluation,[Ref. Para-7.0 (A2)]. These shall not be considered for bid evaluation and the prices shall only be quoted in the price bid.**
- h. A Checklist as per enclosed format **(Annexure-A3)** shall be furnished along with the technical bid.

## **6.2 The following documents are to be submitted along with each unit:**

- a. Invoice, Sale Certificate, Pollution & Roadworthy Certificate (in similar format of Form 21, 22 & 22A of Indian Motor Vehicle Act - sample copies enclosed), Emission Norms Certificate etc. in the name of Oil India Limited as required under Indian Motor Vehicle Act / Rules for registration of the units in the name of Oil India Limited, Duliajan, Assam-786602 (India) shall be submitted along with the supply.
- b. Notwithstanding any clause mentioned elsewhere in the NIT, the Invoice shall be submitted in 02(two) parts separately as under for each complete unit:
  - i. **Invoice for Truck chassis and Driver's cabin: It shall include the cost of the Truck chassis with Driver's cabin and cost of fabrication of the logging cabin only.**
  - ii. **Invoice for logging equipments: It shall include cost of all other equipment, draw works, hydraulic system, winch, tools, accessories, etc. subsequently fitted in the original Truck chassis and supplied separately as part of the unit.**
- c. Type Approval Certificate/COP for the complete vehicle is to be provided along with the supply as the same would be required for custom clearance of the units as per prevailing Indian import policy conditions/guidelines. In this regard, the bidder is requested to note the conditions given in Chapter-87 of ITC (HS), 2012, Schedule-1- Import Policy, Section: XVII of India.

It is to be noted that the Type Approval Certificate should be obtained from international accredited agencies approved by Directorate General of Foreign Trade (DGFT), Ministry of Commerce & Industry, New Delhi. The list of international accredited agencies approved for issuance of Type Approval Certificate/COP is available on DGFT website, under Policy Circular No. 26 (RE-2003)/2002-2007 dated 9.2.2004 pertaining "Type Approval Certificate issuing agencies under Policy Condition Number 7 and 9 of Chapter 87 of ITC (HS), 2012, which further amended vide Policy Circular No. 12 (RE-2013)/2009-2014 dated 15<sup>th</sup> January, 2014 issued by Ministry of Commerce & Industry, Department of Commerce, Director General of Foreign Trade, New Delhi. Bidders shall ensure adherence to any subsequent revisions to the above referred Policy Circulars that may be issued in future by DGFT.

#### **Annexure-A1**

### **7.0 AUTOMOBILE SPARE PARTS LIST:**

- A1.** The following spares for 02 (two) Nos. of the units shall be quoted separately (in the price bid only) cost of which shall be considered for evaluation of the offers. The prices shall only be quoted in the price bid.

#### **Annexure-A1:**

Sl. No.	Description	Quantity
<b>A: ENGINE</b>		
1	Fuel Filter	20 Nos.
2	Water Separator	20 Nos.
3	Engine Oil Filter	20 Nos.
4	Air Filter	20 Nos.
5	Water/Corrosion Filter	20 Nos.
6	Fan Belt	08 Nos.
7	Alternator Belt	08 Nos.
8	Compressor Belt	08 Nos.
9	AC Compressor Belt	08 Nos.
10	Water Pump Assembly	02 Nos.
11	Radiator Water Hose (comprising all hoses)	08 Nos.
12	Radiator Cap	04 Nos.
13	Engine Mounting	02 Full set.
14	All Sensors for the engine (if applicable)	02 Full Set.
15	Engine Control Module (ECM) (if applicable)	01 No.
16	Engine Harness (if applicable)	01 No.
17	Throttle Pedal	02 Nos.
18	Cooler Assembly for Engine Oil (If any)	01 No.
<b>B(i): TRANSMISSION- IN CASE OF FULLY AUTOMATIC TRANSMISSION</b>		
1	Transmission Filter	08 Nos.
2	Transmission Mounting	02 Full Set.
3	Gear Shifter (one inside driver's Cabin) Assembly	03 Nos.
4	Gear Shifter Repair Kit	03 Full Set.
5	Harness-Wiring (if any)	02 Full Set.
6	Transmission Control Module	02 Nos.
7	Cooler Assembly for Transmission Oil, If any	02 Nos.
8	All Sensors for the Transmission (if applicable)	02 Full Set.

Sl. No.	Description	Quantity
<b>B(ii): TRANSMISSION- IN CASE OF AUTOMATED TRANSMISSION</b>		
1	Transmission Filter	08 Nos.
2	Transmission Mounting	02 Full Set.
3	Gear Shifter (one inside driver's Cabin) Assembly	03 Nos.
4	Clutch Disc Assembly	03 Nos.
5	Pressure Plate Assembly	03 Nos.
6	Release Bearing	03 Nos.
7	Release Bearing Fork	03 Nos.
8	Harness-Wiring (if any)	02 Full Set.
9	Cooler Assembly for Transmission Oil (if any)	02 Nos.
10	All Sensors for the Transmission (if applicable)	02 Full Set.
11	Transmission Control Module (if any)	02 Nos.
<b>C: TRANSFER CASE (IF ANY)</b>		
1	Transfer Case Assembly	01 No.
2	Oil Filter (if any)	12 Nos.
3	Mounting	03 Full Set.
<b>D:POWER TAKE OFF (PTO)</b>		
1.	PTO repairing Seal Kit	03 Full Set.
2.	PTO Assembly	01 No.
3.	Mounting	03 Full Set.
<b>E: FRONT AXLE</b>		
1.	Wheel Stud with Nuts- for both the wheels	04 Full sets
2.	Wheel Hub Oil Seal- for both the wheels	12 Nos.
3.	Wheel Hub Bearing- for both the wheels	12 Nos.
<b>F: REAR AXLE</b>		
1	Wheel Stud with Nuts- for all the 4 wheels	04 Full sets
2	Axle Stud with Nuts- for all the 4 wheels	04 Full sets
3	Wheel Hub Oil Seal- for all the 4 wheels	16 Nos.
4	Wheel Hub Bearing- for all the 4 wheels	16 Nos.
5	Differential Oil Seal- for both differentials	18 Nos.
6	Differential Filter Element (in any)	06 Nos.
<b>G: DRIVE LINE (PROPELLER SHAFT)</b>		
1	UJ Cross (Spider and Bearing) for Rear (01 set comprising of 06 Nos. Spider and 06 Nos. Bearing).	02 Full Set.
2	UJ Cross (if any) for Hydraulic Pump	08 Nos.
3	Drive Line Assembly for PTO drive, if any	01 No.
<b>H: STEERING</b>		
1	Steering Oil Filter	06 Nos.
2	Steering Pump Repair Kit	03 Full Set.
3	Steering Cylinder Repair Kit	03 Full Set.
4	Tie Rod End (for both sides)	04 Nos.
5	Steering Pump complete Assembly	02 Nos.
6	Steering Gearbox Assembly	01 No.
7.	Cooler Assembly for Steering Oil (If any)	02 Nos.
<b>I: BRAKE &amp; PNEUMATIC CIRCUIT</b>		
1	Foot Brake Valve Repair Kit	08 Full Set.
2	Front Wheel Servo Assembly	06 Nos.

Sl. No.	Description	Quantity
3	Rear Wheel Servo Assembly	12 Nos.
4	Air Dryer Filter Element, if any	12 Nos.
5	Repair Kit for all Pneumatic Valves (Quick Release Valve, Relay Valve)	03 Full Sets for each valve.
<b>J: SUSPENSION</b>		
1	Front Suspension(Complete assembly)	02 Nos.
2	Rear Suspension (Complete assembly)	02 Nos.
<b>K: ELECTRICAL</b>		
1	Engine Starter (for Truck engine) Assembly	02 Nos.
2	Alternator (for Truck engine) Assembly	02 Nos.
<b>L: HYDRAULIC SYSTEM &amp; ITS COMPONENTS</b> [L/D: Large Drum i.e 7 Conductor Cable Drum, S/D: Small Drum i.e Mono Cable Drum]		
1	Torque hub assembly (if applicable) for L/D	01 No.
2	Torque hub assembly (if applicable) for S/D	01 No.
3	Torque hub repair Kit for L/D	02 Full Set.
4	Torque hub repair kit for S/D	02 Full Set.
5	Hydraulic Pump assembly for winch operation	01 No.
6	Hydraulic Pump assembly for alternator drive	01 No.
7	Hydraulic motor assembly for winch operation (L/D)	01 No.
8	Hydraulic motor assembly for winch operation(S/D)	01 No.
9	Hydraulic Filter	10 Nos.
10	Repair Seal Kit for Hydraulic Pump	02 Full Sets for each pump
11	Repair Seal Kit for Hydraulic Motor	02 Full Sets for each motor
12	Repair Seal Kit for all Hydraulic Valves	02 Full Sets for each valve
13	Hydraulic Hose (all the hoses used in the system)	02 Full Set.
14	Repair Seal Kit for Torque Hub for L/D	02 Full Set.
15	Repair Seal Kit for Torque Hub for S/D	02 Full Set.
16	Repair Seal Kit for all other Hydraulic Actuators	02 Full Sets for each actuator
17	High/Low Clutch control Valve	04 Nos.
18	Brake Valve for Winch	02 Nos.
19	Solenoid for Pump Control	08 Nos.

**NOTE:**

1. All spares in specified quantity as indicated above shall be supplied along with the units.
2. Specific description, quantity etc. of each and every item shall clearly be indicated in the bid.
3. In case of any difference in spares for vehicle's left & right wheel studs, axle studs etc. the specified quantities will be divided into equal parts as far as possible.

**A2.** Additional spares, if any, for 02(two) years maintenance as felt necessary but not covered in the Spare Parts List provided in the NIT shall be quoted **(in the price bid only)** by the bidder separately

mentioning with Description, Part Nos., Make, Cost per Unit etc. which may be procured against order from the successful bidder. **The prices shall only be quoted in the price bid. Price quoted for these additional spares shall not be considered for bid evaluation.**

## 8.0 **Annexure-A3 (To be submitted along with technical bid)**

### **C H E C K L I S T** **Part-A (Technical)**

Sl. No.	Parameters/Requirements		Bidder's Offer (To indicate details or Yes/No as applicable)	Remarks, if any
1.	Overall Dimensions of complete unit	Overall Width		
		Overall Height from ground level		
		Overall Length		
		Ground Clearance		
2.	Offered Truck Chassis	Make		
		Model		
		Wheelbase		
		Seating capacity inside Driver's cabin (including Driver)		
		Emission Norms		
3.	Engine	Make		
		Model		
		Maximum Output Power		
		Maximum Output Torque		
4.	Transmission	Make		
		Model		
		Fully automatic / Automated		
		Number of gears		
		High/Low option		
5.	Transfer Case (if any)	Make		
		Model		
6.	PTO	Make		
		Model		
7.	Steering	Right hand driven Truck (i.e Steering wheel shall be on right hand side inside the Driver's cabin when viewed from rear of the Truck) (Yes/No.)		
		Hydraulic power assisted steering (Yes/No.)		

Sl. No.	Parameters/Requirements		Bidder's Offer (To indicate details or Yes/No as applicable)	Remarks, if any
		Minimum Turning Circle Radius (MTC)		
8.	Type of Front Suspension			
9.	Make, Model & Type of Rear Suspension	Make		
		Model		
		Type		
10.	Drive			
11.	Front Axle	Make of Front Axle		
		Model of Front Axle		
12.	Rear axle	Make of Rear axle		
		Model of Rear axle		
		Differential lock facility for rear axles (Yes/No.)		
13.	Total axle Capacity	Front		
		Rear		
14.	Total Axle Loading	Front		
		Rear		
15.	Maximum Permissible Gross Vehicle Weight			
16.	Total Laden Weight i.e Total mass			
17.	Front Wheels	Total numbers		
		Tyre Size		
18.	Rear Wheels	Total numbers		
		Tyre Size		
19.	Fuel Tank	Total number		
		Capacity of each fuel tank		
20.	Speedometer indicating speed in Kilometers per hour and Odometer shall have Kilometers calibration system (Yes/No.)			
21.	Hydraulic Pump for winch operation	Make		
		Model		
22.	Hydraulic Pump for alternator drive	Make		
		Model		
23.	Hydraulic Motor for winch operation (L/D)	Make		
		Model		
24.	Hydraulic Motor for winch operation (S/D)	Make		
		Model		
25.	Torque Hub for Winch Operation (L/D)(if	Make		
		Model		

Sl. No.	Parameters/Requirements		Bidder's Offer (To indicate details or Yes/No as applicable)	Remarks, if any
	applicable)			
26.	Torque Hub for Winch Operation (S/D) (if applicable)	Make		
		Model		
27.	Marking of hydraulic hoses ( <u>at both the ends</u> ) for easy identification during maintenance / replacement (Yes/No.)			
28.	Hydraulic Hoses, Make			

**Part B: Documentations:**

Sl. No.	Descriptions	Document enclosed (Yes or No)	Remarks, if any
1.	Technical leaflets with detailed specifications, Make & Model of Truck chassis, Engine, Transmission, Transfer case (if any), power take off (PTO) unit, Axles, Suspension, Steering, wheel & rim, brake etc.		
2.	Detailed dimensional layout drawing illustrating Driver's Cabin, Logging Cabin, Rear Cabin and all major items/components.		
3.	Technical leaflets with detailed specifications, Make & Model of all hydraulic pumps, motors, torque hubs of winch drums, brake mechanism of winch drums etc.		
4.	Mechanical power flow block diagram for both road drive & logging operation indicating the major components along with the technical bid.		
5.	List of tools that shall be supplied under Standard Tool Kit for general maintenance of the Truck [Ref. Para-1.13 (g)].		
6.	Specific description, quantity etc. of each and spares as detailed in the Spares Parts List provided in the NIT. <b>[Ref.Para-7.0 (A1)-Annexure-A1]</b>		
7.	List of additional spares as felt necessary for 02 years maintenance but not covered in the Spares Parts List provided in the NIT with Description, Part Nos., Make, etc. (for future reference/procurement only; not for bid evaluation). <b>[Ref. Para-7.0 (A2)]</b>		
8.	Checklist as per enclosed format <b>(Annexure-A3)</b>		

Signature \_\_\_\_\_  
Name \_\_\_\_\_  
Designation \_\_\_\_\_  
Date \_\_\_\_\_



9.0 **SAMPLE COPY OF FORM 21, 22 & 22-A (as referred above)**

A. Following is a sample copy of **FORM 21 of Indian Motor Vehicle Act** only. The certificate shall contain following minimum information -

**FORM 21**

[See Rules 47 (a) and (d)]

**SALE CERTIFICATE**

(To be issued by manufacturer/ dealer or officer of Defence Department (in case of military auctioned vehicles) for presentation along with the application for registration of a motor vehicle).

Certified that ..... (Brand name of the vehicle) has been delivered by us to **OIL INDIA LIMITED** on .....(date).....

Name of the buyer **OIL INDIA LIMITED, DULIAJAN, ASSAM-786602**

Son /wife / daughter .....

Address (Permanent) .....

(Temporary) .....

The vehicle is held under agreement of hire-purchase/lease/hypothecation with .....

The details of the vehicle are given below:

1. Class of Vehicle .....
2. Maker's name .....
3. Chassis No. ....
4. Engine No. ....
5. Horse power or cubic capacity .....
6. Fuel used .....
7. Number of cylinders .....
8. Month and year of manufacture .....
9. Seating capacity (including driver) .....
10. Unladen Weight .....
11. Maximum axle weight & number &  
description of tyres (in case of transport vehicle)
  - (a) Front axle .....
  - (b) Rear axle .....
  - (c) Any other axle .....
  - (d) Tandem axle .....
12. Colour .....
13. Gross vehicle weight .....
14. Type of body .....
15. Wheel Base .....
16. Type of vehicle .....

Signature of the Manufacturer /  
Dealer or Officer of defence Department

**B.** Following is a sample copy similar to **FORM 22 & 22-A** of Indian Motor Vehicle Act only. The certificate to be issued by supplier shall contain following minimum information. –

**FORM 22**

[See Rules 47 (g), 115, 124(2), 126-A and 127(1), 127(2)]

INITIAL CERTIFICATE OF COMPLIANCE WITH POLLUTION  
STANDARDS, SAFETY STANDARDS OF COMPONENTS AND ROAD-WORTHINESS

**(TO BE ISSUED BY THE MANUFACTURER)**

Certified that the following vehicle complies with the provisions of the Motor Vehicles Act, 1988 and the rules made thereunder, including the following mass emission norms:

Brand name of the vehicle	:
Chassis number	:
Engine number	:
Emission norms	:

Signature of Manufacturer

[Form 22, shall be issued with the signature of the manufacturer duly printed in the Form itself by affixing facsimile signature in ink under the hand and seal of the manufacturer. ]

**SAMPLE COPY OF FORM 22(A)**

Following is a sample copy of **FORM 22(A) of Indian Motor Vehicle Act** only. The certificate shall contain following minimum information. –

**FORM 22-A**

[See Rules 47 (g), 115, 124(2),126-A and 127(1),127(2)]  
INITIAL CERTIFICATE OF COMPLIANCE WITH POLLUTION  
STANDARDS, SAFETY STANDARDS OF COMPONENTS AND ROAD  
WORTHINESS (FOR VEHICLES WHERE BODY IS FABRICATED SEPARATELY)

**PART – I**

**(TO BE ISSUED BY THE MANUFACTURER)**

Certified that the following vehicle complies with the provisions of the Motor Vehicles Act, 1988 and the rules made thereunder, including the following mass emission norms:

Brand name of the vehicle : .....  
Chassis number : .....  
Engine number : .....  
Emission norms : .....

Signature of Chassis Manufacturer

Form 22-A, Part I shall be issued with the signature of the manufacturer duly printed in the Form itself by affixing facsimile signature in ink under the hand and seal of the manufacturer.

**PART – II**

**(TO BE ISSUED BY THE BODY BUILDER)**

Certified that body of the vehicle .....(brand name of the vehicle) bearing Chassis number ..... and Engine Number ..... has been fabricated by us and the same complies with the provisions of Motor Vehicles Act, 1988 and Rules made thereunder.

Signature of body builder

Form 22-A, Part II shall be issued with the signature of the body builder duly printed in the Form itself by affixing facsimile signature in ink under the hand and seal of the body builder.

## **LOGGING SECTION**

Oil India Limited intends to procure two nos. of brand new and not more than one year old as on the date of placement of order (LOI), state-of-the-art, heavy duty, integrated truck mounted computerized Logging units with downhole logging tools and accessories. The unit must have Dual drum/ Split Drum and should comprise of a logging cabin, surface electronics, operational and application software to smoothly carryout conventional wireline and pipe conveyed logging and perforation services in Open Hole & Cased Hole to a minimum well depth up to 6000 m.

The two logging units must have the following minimum features as mentioned from clauses 1.0 to 10.0 below, in addition to standard accessories and fittings.

**NOTE 1: Bidders must quote all the items required for carrying out smooth and safe logging operations irrespective of whether they are mentioned explicitly in this document.**

**NOTE 2: Bidders must quote prices for the Logging Units 1 & 2 (Automobile and Logging section items) with tools, accessories and spares etc., under two SEGMENTS and provide FOUR separate quotes involving the following items as mentioned below.**

**[i] UNIT 1 Quote 1 (TRUCK CHASSIS & DRIVER'S CABIN+ COST OF FABRICATION OF THE LOGGING CABIN ONLY)**

**[ii] UNIT 1 Quote 2 FOR: LOGGING UNIT-1 (DRAW WORKS, HYDRAULICS, WINCH, DUAL SYSTEM COMPUTER ETC.)+ AUTOMOBILE SPARES + RIG-UP ACCESSORIES FOR UNIT1&2 +TOOLSET 1&ACCESSORYSET+Any OTHER ITEMS DEEDED NECESSARY BY VENDOR AS PER Appendix 5**

**[iii] UNIT 2 Quote 3 (TRUCK CHASSIS & DRIVER'S CABIN+ COST OF FABRICATION OF THE LOGGING CABIN ONLY)**

**[iv] UNIT 2 QUOTE 4 FOR: LOGGING UNIT-2 (DRAW WORKS, HYDRAULICS, WINCH, DUAL SYSTEM COMPUTER ETC.) + TOOLSET 2 & ACCESSORYSET+ LAB SYS+ DPI + LOGGING SPARES+ TRAINING CHARGES+INSPECTION CHARGES+COMMISSIONING CHARGES AS PER Appendix 6**

**1.0 HYDRAULICS SYSTEM:**

- 1.1** The Logging truck hydraulic system must drive the winch drums and the on-board power generator.
- 1.2** The Dual drum/ Split Drum(hepta-cable drum and mono-cable drum) powered by the hydraulic system, shall have extremely fine speed control from *1 m/min or less to 150 m/min or more*; even at maximum load condition
- 1.3** Winch hydraulic drive control, speed and pull to be done with an *electronic proportional control joystick* lever mounted on the operator's control panel.
- 1.4** Winch drum creeping should not be more than 0.5 m/min and 5 m/min respectively under low gear and high gear condition when joystick is kept at neutral position without applying brake at any depth and load condition on the hydraulic system.
- 1.5** The system must have a *mooring control* for cable spool-off under line tension during Tool pusher logging (where cable pulling is done by the rig).
- 1.6** Bidder must provide a back up electrically operated hydraulic brake along with backup mechanical hand brake for the winch.

**2.0 OVERHEAD SPOOLING AND DEPTH MEASURING SYSTEM:**

- 2.1** The overhead Spooling system must be lightweight with a pneumatic cylinder for height adjustment with hydraulic side to side steering.
- 2.2** Overhead spooling system with accurate *straight line measuring head* for metric depth transmission having dual electronic encoders, a tension device and independent mechanical/electronic backup encoder for both Slammer & mono-conductor cables. The display of the backup mechanical/electronic encoder to be made available near the winch operator panel.
- 2.3** *Line weight measuring system* with a weight indicator to measure line tension upto 25,000 lbs (9842.5 kg) to be provided. It should have digital display for total and differential load. Weight measurements should have audio and screen alarms at operator's panel for increase/decrease of line load.
- 2.4** The depth measuring panel must be capable to compute cable stretch via software for interactive depth correction.
- 2.5** A parallel-working Remote Display System for display of Depth and Line tension at Rig floor required for Fishing operation must be provided.

### 3.0 ELECTRICAL SYSTEM / EQUIPMENT:

- 3.1** Adequate, stable electrical power must be generated by the truck's Hydraulic alternator(preferably Marathon generator Magna Plus Model: 283PDL1766 having 30KW capacity) for power requirement of the surface system, downhole tools, air-conditioners& all other electrical accessories in the logging unit.
- 3.2** The captive power source must be equipped with voltage and frequency monitor & control, over/under voltage and frequency protection.
- 3.3** The on-board power generator must have automatic safety shut-down features.
- 3.4** The electrical system must have a **Power Distribution board** inside logging cabin, with circuit breakers, power plant controls, and frequency, voltage and current meters.
- 3.5** The operator's cabin to have a Red, night vision light.
- 3.6** A suitable power intake point is to be provided to feed power into the unit from external source. Flexible cable (Approx. 20M in length) with suitable plugs for this purpose should be provided.
- 3.7** Electrical power outlets for internal accessories are to be provided.
- 3.8** Exterior power outlets should be properly covered.
- 3.9** Color coded / Function coded truck electrical wiring and easily accessible for maintenance and service purposes must be provided. Entire wiring should be well documented.
- 3.10** Back up electrical power generator sufficient to supply power to surface system, logging tools, **required air-conditions to provide sufficient cooling** etc., should be provided. The back-up electrical power source should be one of the following power systems.

**3.10.1** One Diesel Generator, low noise/silent (Preferably Cummins Onan Model 8HDKAU-41934R having 8KW capacity) mounted on the unit in addition to the main hydraulic alternator.

**3.10.2** One backup hydraulic alternator fitted on the unit in addition to the main hydraulic alternator.

**NOTE:** The unit must have provision for Toggle switch for transfer of electrical power to sources (Hydraulic Alternator or Backup diesel Generator).

**NOTE:** The unit must have an option for backup diesel generator remotely operated from operator's panel inside the logging cabin.



#### 4.0 LOGGING CABIN / OPERATOR'S COMPARTMENT:

- 4.1** The logging cabin must be suitably air-conditioned using **either 4 nos. of covered roof mounted electrical air-conditioners or 3 nos. of covered roof mounted electrical air-conditioners with 4<sup>th</sup> AC being given as spare with no extra cost. This 4<sup>th</sup> AC shall be in addition to spare ACs mentioned in Annexure-B17 of the tender.** ACs should be able to maintain the inside temperature of logging cabin between 15 - 25 Deg C when outside temperature ranges from 8 degree C to **45 Deg C**. The air-conditioners should be appropriately mounted to withstand the shock of transportation on rough country roads. The air-conditioner exterior body must be protected against any impact by using suitable metal cover on the top.
- 4.2** The logging cabin should have a requisite capacity dehumidifier and temperature indicator should be installed.
- 4.3** The cabin must have enough space for operating engineers, a witness and the winch operator.
- 4.4** The logging cabin should have suitable LED lights for proper illumination.
- 4.5** The unit must have suitable LED lights installed at the draw works area. Both rear corners on the winch side of the truck body must have LED rig-lights installed having sufficient power to illuminate the well-site working area. Additionally, another set of LED rig-lights having sufficient power should be installed immediately below the rear corner rig-lights operated directly from the truck battery. Both lights at the rear exterior corners must have suitable metallic cover at sides to protect against impact.
- 4.6** The logging unit must have required Emergency lights, Rig Stray Voltage & RF Monitor unit mounted inside the logging cabin for perforating safety.
- 4.7** Two numbers of Fire extinguishers and one no. of first-aid kit are to be provided.
- 4.8** The unit must come with Weather-proof two way 'Rig Floor to Unit Communication' device.

- 4.9**Cabin pressurization system should be provided to pump filtered fresh air in to the logging cabin for preventing entry of dust.
- 4.10**Four numbers of swivel type chairs should be provided, one for the winch operator and other three for the logging engineers and witness. Chairs must be fully adjustable, industrial type and ergonomically designed.
- 4.11**Logging Engineer console should be located side-by-side to the operator's winch panel.
- 4.12**At least three numbers of drawers with locking / latching arrangement should be provided in the logging cabin to store logging manuals.
- 4.13**A Console Panel for controlling and monitoring various parameters related to winch, truck engine, **voltage & current** drawn from internal and external source etc., should be provided
- 4.14**Slip proof metallic floor with suitable carpet/non-slip rubber mat.
- 4.15**All steel welded construction materials should be quoted and painted to resist corrosion.
- 4.16**The logging cabin must have a sliding window with unbreakable, antiglare glass above winch area to provide unrestricted view of operations.
- 4.17**A roll up tinted window shade must be provided to minimize sunlight or external light glare through the window.
- 4.18**Apart from normal power outlets (110Vac, 50/60 Hz)provided inside the logging cabin minimum one numbers of power outlets (220Vac, 50/60 Hz) to be given in the logging cabin (preferably multi socket that accepts British plugs in addition to Euro, NEMA American and Australian plugs with ON/OFF switch)

**NOTE 3: The Logging cabin must be designed to provide ample working and seating space.**

## 5.0 SURFACE LOGGING SYSTEM

The log data acquisition and processing system should be an integrated collection of state-of-art hardware & software required for carrying out all open hole, cased hole and perforation services. It must be a field proven, latest version **DUAL (redundant)Logging System**, having the following basic features:

- 5.1** The latest digital data acquisition system must have excellent measurement integrity and provide highest data quality.
- 5.2** Both the independent data acquisition systems in DUAL system architecture must be complete independent systems with capability to acquire data independent of the other.
- 5.3** The offered surface logging system must be capable of performing the logging operations and services with the type of tools as described in the Clauses 12.6 to 12.23 (if optional tool is quoted by bidder).
- 5.4** The offered surface logging systems must be able to run cased hole services. Bidder MUST quote two separate Cased Hole Interface Panels working independently in each Logging unit. The cased hole service panels must work with latest application software preferably "WARRIOR" having requisite dongle and / or licenses(if applicable) for running different cased hole services as mentioned below. Shooting panel or equivalent system capable of conducting down hole explosive jobs should have safety key for operation. The panel must comply API RP 67 or later (if any) recommended practices.

**Cased Hole services includes:**

- a.** Analog CBL/VDL/GR/CCL tools
- b.** Pulse GR Tools
- c.** Perforation services using passive shooting CCL and shooting Gamma ray/CCL tools
- d.** Any other cased hole services like tubing/casing cutter, free point service for stuck determination etc.

**e.** Services like all types of Plugs / Packer setting jobs.

- 5.5** The surface logging system offered should be able to perform logging with GE-Sondex Ultra-link tools (PLT/MIT/MTT) available with OIL. Suitable Hardware and Software required to carry out above operations with above system must be quoted.
- 5.6** Change over from one independent surface logging system to the other must be easy and user-friendly.

## **6.0 LOGGING SYSTEM HARDWARE (DUAL SYSTEM)**

- 6.1** A Dual surface logging system inside each logging unit must include the following items, in addition to other Standard fittings /accessories:
- 6.1.1** Thermal Plotters for generation of hard copy on Paper (roll & fanfold) & Film – 04 nos.(Two printers fitted per system ). In case, if only two thermal plotters are mountable due to paucity of space then, other two plotters should be provided separately.
  - 6.1.2** External Portable USB Hard Drive (min 4 TB) for data storage -02 Nos. for two units. (one for each unit)
  - 6.1.3** CD / DVD-RW Drive for data delivery- 02Nos.(ONE unit fitted per system)
  - 6.1.4** Uninterrupted Power Supply -02 Nos.(ONE unit fitted per system)
  - 6.1.5** 8.5” color printer capable of printing continuous logs – 01 No. per Logging Unit
- 6.2** Each system CPU must be very high speed, state-of-art computer with sufficient RAM and hard drive capacity, supporting dual display and capable of multi-tasking operations.
- 6.3** Each system should have at least 02 (two) Monitors (TFT type preferably) working simultaneously. The two monitors must be swappable from one system to the other with user-controlled video switch panel. In case, if the other two monitors common to both surface systems are not mountable due to paucity of space than these two monitors should be provided separately.
- 6.4** If any panel in the DUAL surface system architecture is found common to both the logging systems, the other panel should be provided separately.
- 6.5** The Dual Logging System must be a collection of two independently working full capability logging system, and should have minimum number of common panels, if any, to ensure full redundancy.
- 6.6** Must support full–data communication between the two computers of the Dual computer system.
- 6.7** Each computer must be supplied with two independent mirrored hard drives for replication of Data in both hard drives during acquisition.

<b>7.0</b>	<b>LOGGING SYSTEM SOFTWARE</b>
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- 7.1** The system should work on the latest operating software. Application Software or software for data acquisition should be menu driven, user friendly with multi-tasking capability.
- 7.2** Oil India Limited's logo must be incorporated in all log printout and processed output.
- 7.3** Apart from the latest operating and application software, system diagnostic software must be provided either in-built or separately for troubleshooting and functional testing of surface system as well the downhole tools.
- 7.4** The system must be capable of converting log data into API standard LIS, ASCII (LAS) and other standard formats.
- 7.5** The system must include all necessary environmental correction packages for the downhole tools.
- 7.6** The system software must include automatic depth correction capability.
- 7.7** Record real-time and playback on thermal paper/film in different depth scales i.e., 1/20, 1/40, 1/100, 1/200, 1/1000 in metric system in API format.
- 7.8** The system software must display real-time corrected depth and line tension.
- 7.9** Details of the software along with price break up for each module (if any) should be provided.
- 7.10** Backup copies of all loaded software shall be supplied in CD / DVD format.
- 7.11** The bidder should give an undertaking to support licensing for the software originally supplied for a minimum period of 10 years from the date of commissioning of the unit.
- 7.12** Bidder should offer undertaking for free periodic updation / up gradation of the Software for a minimum period of 10 (ten) years from the date of commissioning of the unit.

<b>8.0</b>	<b>ADDITIONAL LOGGING UNIT FEATURES:</b>
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- 8.1** Nonmagnetic **Dual Drum /Split Drum** cable reels having Direct Drive. The multi conductor cable shall be a seven conductor **12.0396 mm (0.474 inch) OD or as per bidder's cable size, minimum 6496 m (21306 feet) long Slammer cable / Vector Cable** having breaking strength of at least 24,000 lbs. The single conductor cable shall be of 5.55625 mm (7/32") OD, **minimum 6500 m (21306 feet)** in length having breaking strength of at least 5,400 lbs fitted in one unit and of 7.9375 mm (5/16") OD line size in another unit having **minimum 5000m (16400 feet) in length** having breaking strength of at least 11,000 lbs. The rated temperature for both the cables must not be less than 400 Degrees F. Both the logging cables must be of a reputed manufacturer with proven field records
- 8.2** The logging unit multi-conductor winch drum must be capable of providing pulling force up to 15000 Lbs during stuck conditions, the hydraulic system rating of the large drum winch must be sufficient to withstand these over-pulls safely (well within system rating of the logging units).
- 8.3** The logging units should provide requisite compressed air supply with 100 meters long hose pipe for use in minimum 5000 psi grease injection control head for through Tubing Perforations.
- 8.4** A certificate should be provided confirming micro fractures / cracks free base mounting frame of the cable drums.
- 8.5** Built-in line oiler system for lubricating the cables with the operating switches on the winch operator's control panel.
- 8.6** Grounding reel fitted with at least 50 meters cable with appropriate clamps for grounding during side wall coring, perforations and other allied wire line operations should be provided.
- 8.7** Reels necessary for mud pit, intercom, top load cell etc., of at least 100m length to be provided.
- 8.8** Tool racks with suitable, independently working (so that if air bags in one rack fails it should not affect functioning of others) air bags for transportation of downhole tools must be provided. The tool racks must accommodate the longest tool supplied by the bidder. Two tools slots of minimum

6m to be provided for transporting 4" TAG guns. The air bags must be easily accessible for replacement.

- 8.9** Tool storage area must be installed under the floor of the drum area for longest length tools, guided with roller support.
- 8.10** The winch drums must be fitted with slip rings having ample protection from moisture, dust and rain. Both slips rings should be easily accessible for repair and maintenance work.
- 8.11** Rear bumper should be fitted with a removable working vise and folding step.
- 8.12** Pneumatic line wipers for cleaning drilling fluid from the cables should be provided.
- 8.13** All the electrical wires running in the winch / draw works compartment must be concealed/conduit.
- 8.14** Body to be painted to OIL's specification (and with OIL logo).

**(Logo / specification shall be provided by OIL after placement of order)**

- 8.15** Safety / Warning Signs (pertaining to radioactive and explosive jobs) must be provided.



<b>9.0</b>	<b>STORAGE REQUIREMENT WITHIN THE LOGGING UNIT:</b>
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- 9.1** Bidder must provide suitable storage compartment for Radio Active source (Density and Neutron sources) transportation as per Radiation Safety Standard. Proper arrangement should be provided in the said compartment to secure the source containers.
- 9.2** Logging unit must have two separate compartments, one for carrying Shaped Charges (secondary explosive) and the other for carrying Electric Detonators (primary explosive). These two compartments should be separated by a distance of minimum 1.5 meters as per Indian Explosive Rules. The inside of these compartments should be panelled with good quality non-sparking material. These two individual compartments should be minimum 1.15 meters away from the electrical power sources and fuel tanks mounted in the Logging Truck. **The minimum size of the inner compartments (excluding wooden liner) carrying explosives should be as follows:**

Compartments	Length (metres)	Breadth(metres)	Height(metres)
For charges	0.9	0.6	0.6
For Detonators	0.3	0.2	0.2

- 9.3** Bidder should provide properly designed compartments for rig up accessories and hand tools.
- 9.4** All compartments should have heavy duty locking / latching arrangement.
- 9.5** A heavy-duty steel rear bumper with storage compartments must be installed. Plate must be installed at top of the rear bumper for installation of supplied vise. Fold down access steps will be provided for ease of entry to the drum area.
- 9.6** The drum area flooring will be of aluminium tread plate material. A roll up weather resistant cover must be installed over the drum area opening.

## 10.0 LOGGING RIG-UP & OTHER ACCESSORIES:

The logging units should be fully equipped with rig up and other standard accessories for straightaway commissioning of the units. Detail list along with price breakup of each item has to be provided in the price bid. All operationally vital items must be included with the standard rig-up accessories.

<b><u>10.1</u></b>	Upper and Lower Sheaves suitable for the slammer with floor stand etc.	02setsperlogging unit
<b><u>10.2</u></b>	Upper and Lower Sheaves suitable for 7/32" and 5/16" OD mono-cable with floor stand etc	02sets per logging unit
<b><u>10.3</u></b>	Elevator Hook (T-Hanger) for the offered Sheave wheels	02 nos. per logging unit
<b><u>10.4</u></b>	Cable-hanger with liner for the slammer	02 sets per logging unit
<b><u>10.5</u></b>	Cable-hanger with liner 7/32" OD & 5/16" OD mono-cable	01 set per logging unit
<b><u>10.6</u></b>	Tie back chains with hooks and shackles: (a) 20 ft length, 7.5 Tons approx. capacity (b) 30 ft length, 17.5Tons approx. capacity	02 sets per logging unit
<b><u>10.7</u></b>	Goose neck for the offered Slammer cable	01no.per logging unit
<b><u>10.8</u></b>	Goose neck for the offered 7/32" & 5/16" OD cables	01no.per logging unit
<b><u>10.9</u></b>	Portable Hydraulic and cable cutter with 10nos. of additional blades for the cutter.	03sets
<b><u>10.10</u></b>	Electric cable cutter with 10 nos. of additional blades for the cutter	02 sets
<b><u>10.11</u></b>	Portable Digital Multi-meter with carrying case	04 nos.
<b><u>10.12</u></b>	Portable Analog Multi-meter with HARD BOX type carrying case	04 nos.
<b><u>10.13</u></b>	Portable Digital Insulation Tester with case	04 nos.
<b><u>10.14</u></b>	Portable hand held Blasting Galvanometer for Ballistics purposes with HARD BOX type carry case.	04 nos.
<b><u>10.15</u></b>	Portable, handheld Radioactive Monitoring Meter with remote monitoring probes for measuring <b>radiation exposure of Gamma sources</b> (meter scale to be as per international standard, if applicable)	02 nos.
<b><u>10.16</u></b>	Portable, handheld Radioactive Monitoring Meter with remote monitoring probes for measuring <b>radiation exposure of Neutron sources</b> (meter scale to be as per international standard, if applicable)	02 nos.
<b><u>10.17</u></b>	36" Ridgid make Pipe Wrenches	02 nos.
<b><u>10.18</u></b>	24" Ridgid make Pipe Wrenches	08 nos.

<b><u>10.19</u></b>	18" Ridgid make Pipe Wrenches	08 nos.
<b><u>10.20</u></b>	Standard Electronic Tool Box with tools required for logging operations at well-site	02 set
<b><u>10.21</u></b>	Standard Electronic Tool Box (Repair Mechanics Tool Box) with tools for maintenance and repair of surface system and logging tools	02 set
<b><u>10.22</u></b>	Standard Mechanical Tool Box with tools required to carry out mechanical repairs	02 set
<b><u>10.23</u></b>	Well-site Logging Tool vertical make-up tool stand	04 nos.
<b><u>10.24</u></b>	Weak Points are to be quoted as follows	
	(a) Approx. 6000 lbs	10 nos.
	(b) Approx. 8000lbs	45 nos.
	(c) Approx. 10000lbs	45 nos.
	(d) Approx. 12000lbs	10 nos.
<b><u>10.25</u></b>	Cable heads for <u>Slammer, 7/32" &amp; 5/16" OD</u> logging cable	03 sets per logging unit
<b><u>10.26</u></b>	<b><u>For Bidders offering GO Type Mono cable head</u></b> a) Adaptor sub for 7-Conductor to 1-Conductor (GO Type Pin connection)	02 Nos.
	<b><u>For Bidders offering Non- GO Type Mono cable head</u></b> b) Adaptor Sub for 7-Conductor to 1-Conductor (Non-GO type pin connection) c) Adaptor Sub for Non-GO connection to GO Pin type connection (1-Conductor to 1-Conductor)	02 Nos each.
<b><u>10.27</u></b>	Re-head Kit for Multi-conductor Cable head (inner/outer cones, pin, boots etc.,)	100 sets
<b><u>10.28</u></b>	Re-head Kit for mono-cable head (cone, cone-retainer, boots etc.,)	30 sets
<b><u>10.29</u></b>	Redress Kit for Releasable Wireline Cable Head	30 sets
<b><u>10.30</u></b>	All hand tools needed for the re-head jobs must be quoted (for slammer cable head, mono cable head etc., if available)	6 sets
<b><u>10.31</u></b>	Hydraulic oil filling system for downhole tools comprising of vacuum pump, fluid lines and adapters etc.	01 set
<b><u>10.32</u></b>	Grease for Cable head (to be used with Grease guns, DC-111 of 400 gm or equivalent)	200 nos.
<b><u>10.33</u></b>	Lubriplate or Equivalent (approx. 14 oz/397 grams.)	50 nos.
<b><u>10.34</u></b>	Tool oil used in all the downhole logging tools	05 gallons of

		each type
<b><u>10.35</u></b>	Test Radioactive sources, if any, with containers meeting RA safety standard	02 nos. each
<b><u>10.36</u></b>	Shooting CCL (Passive, 1-11/16" OD)	08 nos.
<b><u>10.37</u></b>	a) Basket Stand	20 nos.
	b) Adjustable high stands for use during tool testing, calibration.	10 nos.
	c) Tool Dolly	20 nos.
<b><u>10.38</u></b>	Complete cable splicing kit for multi-conductor cable	02 set
<b><u>10.39</u></b>	Strap wrench, Ridgid make	02 set
<b><u>10.40</u></b>	Well-site handling tools – Allen keys sets, Wrenches, C-Spanners, Snap-Ring pliers, U-Bolt and other tools required for well-site operation.	05 set
<b><u>10.41</u></b>	Thermometer Kessler or equivalent 100-400 degF suitable for use with Cable Head/Thermometer Sub.	04 nos.
<b><u>10.42</u></b>	Derrick-mounted, top sheave load cell required for measurement of suspended weight of the wireline and tools with electronic read-out of the suspended weight displayed on the depth panel inside logging unit. The load cell shall be resistant to shock and vibration.	05 nos.
<b><u>10.43</u></b>	Any other <i>items and hand tools</i> which are operationally required but not mentioned above must also be quoted (Required for Logging/Perforation jobs)  [BIDDER MUST QUOTE ANY OTHER ITEM THAT HAS NOT BEEN MENTIONED ANYWHEREIN THE DOCUMENT BUT IT IS NECESSARY FOR CARRYING OUT OPERATIONS WITH OFFERED TOOLS IN WIRELINE MODE]	As required

**NOTE 4: During equipment commissioning, if certain items required for standard safe operation are found to be deficient as the bidder has not quoted them, then all such items must be supplied at no charge to OIL.**

**NOTE 5: OIL at its discretion may increase or decrease any item(s) quantity under clause 10.0**

**11.0 TECHNICAL MANUALS AND DOCUMENTATION:****QUANTITY= 01 SET EACH FOR TWO UNITS**

The following technical manuals and documentations mentioned in Clauses 11.1 & 11.2 are to be supplied **at no charge to OIL:**

**11.1 THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED ALONG WITH THE BID FOR BID EVALUATION:**

In addition to those mentioned in the NIT, the Technical Bid must include the following:

- 11.1.1** Technical leaflets, literatures with detailed specifications, Make & Model of Logging Truck, Downhole Tools, Surface System, Fishing equipment etc. must be offered in the Bid.
- 11.1.2** Block Diagram of the surface Logging System containing all panels.
- 11.1.3** Layout drawing of proposed logging Cabin.

**11.2 THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED ALONG WITH THE SUPPLY OF THE LOGGING TRUCK:**

- 11.2.1** Four sets of Training Notes / Study Guides for the offered logging tools in properly bound volumes.
- 11.2.2** Four sets each of Operations and maintenance Manuals covering all Mechanical, Electrical, Electronic systems and sub-systems, Schematics of all the systems and sub-systems, including downhole logging tools in properly bound volumes.
- 11.2.3** Soft copies of all the above documents in CD/DVD / **USB**
- 11.2.4** All technical brochures / specification documentation and software related to the logging systems, all downhole tools and all major equipment/accessories offered by the bidder must be in English Language only.

## 12.0 DOWNHOLE LOGGING TOOLS:

**12.1** All downhole logging tools (**except HRLA, MSFL, SDL, DSN, ACRT and RMT tool**) mentioned in this clause should be rated for minimum 124 MPA (18,000 PSI) pressure and minimum 174Deg C (345Deg F) temperature. **For HRLA, MSFL, SDL, DSN, ACRT and RMT tool minimum pressure and temperature shall be 103 MPA (15,000 PSI) and 149 DegC (300 DegF) respectively.** The downhole tools must withstand maximum rated pressure and temperature for a minimum period of one-hour continuous exposure

**Bidder must provide an undertaking that the quoted tool under clause 12.0 must be offered having full functionality. Necessary associated tools, accessories, processing software, if found missing during commissioning or later, should be provided at no cost to OIL.**

**12.2** Tool should be equipped with proper accessories to log holes up to deviation up to 45degrees.

**12.3** Bidder must quote all equipment and accessories, wherever necessary, for smooth operation. Bidder should quote all items mentioned in clause 12.3.1 to 12.3.3 for all down hole tools.

S/N	AUXILLARY EQUIPMENT	QTY	REMARKS
<b>12.3.1</b>	a) Knuckle joint /Flex joint (preferably pressure compensated type)	<b>Qty-04</b>	Bidder MUST quote these accessories for use with offered logging tools.
	b) Hole finder	<b>Qty-02</b>	
	c) Swivel	<b>Qty-01</b>	
	d) Bull plugs	<b>Qty-06</b>	
	e) Terminators if required	<b>Qty-02</b>	
	f) Cross Over Sub if Required	<b>Qty-02</b>	

12.3.2	Open Hole tool body low friction rollers/ Fly wheels, Roller Bottom nose etc. low-friction conveyance accessories to reduce frictional drag forces/contact friction acting on the low side of the tool string.	Low friction rollers/ Fly wheels= <b>Qty-10</b>	Bidder MUST quote tool body rollers, roller bottom nose & all low friction conveyance accessories.
		Roller Bottom nose= <b>Qty-02</b>	
		Any other conveyance accessories if reqd. to be quoted <b>Qty-01EA.</b>	
12.3.3	<p>(a) Tool Centralizers or any accessory required for running offered Open Hole logging tools up to 45 Degrees deviated wells.</p> <p>(b) THE QUOTE MUST <u>INCLUDE</u> CENTRALIZERS TO BE USED IN HIGHLY DEVIATION CASED HOLE WELLS TO MAINTAIN REQUIRED CENTRALIZATION.</p>	<p>As required for running offered tools in deviated OH section, if any. Qty-02 (8.1/2" OD to 17.1/2" OD)</p> <p><b>QTY=02 EA</b> for tools as applicable (5.1/2" to 9.5/8" OD casing size)</p>	Bidder MUST quote centralizers for deviated wells.

**12.4** The bidder must submit the technical specifications against each downhole tool in a tabular format (Ref. Annexure – 1). The technical specification table must include information on tool diameter, borehole diameter ranges, casing OD ranges, measurement type and ranges, depth of investigation, vertical resolution, accuracy, pressure & temperature rating etc. as applicable, in addition to others. Any deviations from OIL technical specifications should also be highlighted in this tool specs table.

<b>12.6 HIGH RESOLUTION LATEROLOG TOOL (Minimum 4 RESISTIVITY MEASUREMENTS) OR EQUIVALENT QUANTITY = 03 NUMBERS</b>
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The High-Resolution Array Laterolog Tool should be able to determine true formation resistivity - Rt in thinly bedded and deeply invaded formations having following minimum technical specifications.

**Minimum Technical Specification:**

**12.6.1** The tool should be capable of recording minimum FOUR independently focused measurements (with increasing depth of investigation, giving clear indication of invasion) of shallow, medium and deep resistivity simultaneously. All array curves should be Laterolog based measurements only.

**12.6.2** Should be able to log boreholes of diameter in the range from 6 inches to **17-1/2** Inches (to measure using extended arm fitted with the tool)

**12.6.3** Depth of investigation= **35** inches or better (Median response at Rt/Rxo contrast 10/1)

**12.6.4** Should have vertical resolution of 1 ft. or less.

**12.6.5** Tool multiple frequency measurements must be Depth matched and resolution aligned.

**12.6.6** Shop Calibration system and all onsite test equipment for tool check should be provided, quantity = 02 set.

**12.6.7** The system should be capable of recording SP log with the offered resistivity tool.

**12.6.8** The Laterolog tool should be combinable to run with other formation evaluation tools (i.e., Run HRLA in Triple/Quad combo strings / with Padded type Rxo- Micro-spherically Focused Tool etc.)

**12.6.9** Resistivity profile at least at four depth of investigation with 1ft or better vertical resolutions.



**12.6.10** Computer centre software products (Using Inversion technique) must generate true resistivity, flushed zone resistivity, and depth of investigation.

**12.6.11** All items / assemblies for the tool should be quoted individually

**12.6.12** Bidders must offer Centralizers, Low Friction or Low contact Area Stand-off, etc. for logging in hole sized from 8.1/2"OD to 17.1/2" ( Centralizers Quantity-03 nos. per tool, Stand-off Quantity-05 nos. per tool and any other item required for smooth and successful operation to be offered in requisite quantity ) . For logging in 6" hole size separate slim Centralizers, Low Friction or Low contact Area Stand-off suitable for smaller borehole operation etc. must be quoted ( Centralizers total Quantity-05 nos. against 3 sets of tool, Stand-off Quantity-10 nos. against 3 sets of tool and any other item required for smooth and successful operation to be offered in requisite quantity ).

**NOTE 6: The HRLA tool MUST not use any bridles for its operation.**

## **12.7 MICRO SPHERICALLY FOCUSSED TOOL OR EQUIVALENT**

**QUANTITY = 03 NUMBERS**

### **Minimum Technical Specification:**

- 12.7.1** The tool should be **padded Rxo** device working on micro focusing principle.
- 12.7.2** The tool should be able to measure Flushed Zone Resistivity in the range from minimum 0.2 ohm-m to 2000 ohm-m with accuracy of 7% from 0.2 to 200 ohm m and +/- 10% at 200-2000 ohm m
- 12.7.3** Should be able to log hole of diameter from 6 inches to 20 inches.
- 12.7.4** Caliper accuracy must be +/- 10% or better for hole size 6" to 20".
- 12.7.5** Vertical resolution of the tool should be 3.0 inch or better.
- 12.7.6** Shop Calibration system, onsite test equipment for tool check and caliper calibration fixtures etc. are to be provided, quantity = 02 sets.
- 12.7.7** The tool should be capable of logging with High Resolution Laterolog tool (clause 12.6) in single pass.
- 12.7.8** All items / assemblies for the tool should be quoted individually.

<b>12.8 SPECTRAL LITHO DENSITY LOGGING TOOL OR EQUIVALENT</b> <b>QUANTITY = 03 NUMBERS</b>
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**Minimum Technical Specification:**

- 12.8.1** Compensated formation density tool capable of deriving Borehole Compensated formation density. The tool should be capable of measuring the photo-electric absorption cross-section (Pe) of formation matrix.
- 12.8.2** The measurement range of the tool should be from 1.3 gram/cc to 3.0 gram/cc for bulk density and Pe of range 0.1-10 barns/electron.
- 12.8.3** The tool calliper should have measuring range from 6 inches to 17.1/2 inches or more.
- 12.8.4** Should have vertical resolution of 3 ft. or less for density.
- 12.8.5** Base Calibration system, simulators, sleeves (if any) and other accessories, and onsite test equipment / jigs for the tool check should be provided, quantity = 02 sets.
- 12.8.6** Radioactive sources for Tool Calibration and Logging Operation along with their respective containers meeting IAEA safety standard, and also source handling tools must be provided as below:
- a) Radioactive Sources = 01 nos. for each tool
  - b) Radioactive Source Containers = 01 no. for each source + 01 spare container  
\*\* (i.e., 03+01 nos.)
  - c) Radioactive Source Handling tools = 08 nos.
  - d) Radioactive Source catcher = 03 nos.
- 12.8.7** All items / assemblies for the tool should be quoted individually.

**\*\* BIDDERS MUST QUOTE ADDITIONAL ONE NOOF EMPTY RA CONTAINERS WHICH SHALL BE MOUNTED ONE IN EACH UNIT INSIDE THE RA STORAGE COMPARTMENT.**

**12.9 COMPENSATED DUAL SPACED NEUTRON POROSITY TOOL OR EQUIVALENT**  
**QUANTITY = 03 NUMBERS**

**Minimum Technical Specification:**

- 12.9.1** The tool should be eccentered dual detector type and should record formation Neutron porosity.
- 12.9.2** The tool should also be able to record porosity log in Open Holes with provision to measure in Cased Hole by compensating for casing, cement thickness.
- 12.9.3** Measuring range of the tool should be -2 PU to 100 PU (Porosity Unit) with an accuracy of  $\pm 8\%$  or less for 0- 100 p.u. The tool should be calibrated to Limestone porosity along with a provision to change over to Sandstone/Dolomite porosity scales
- 12.9.4** Should have vertical resolution of 3 ft. or less.
- 12.9.5** Should have Depth of investigation (50%) 6 inches or better
- 12.9.6** Should be able to log boreholes of diameter from 6 inches to 20 inches (approx.)
- 12.9.7** Base Calibration system, simulators, sleeves (if any) and other accessories, and onsite test equipment / jigs (if any) for the tool check should be provided, Quantity = 02 sets.
- 12.9.8** Radioactive sources for Tool Calibration and Logging Operation along with their respective containers meeting IAEA safety standard, and also source handling tools must be provided as below:
- a) Radioactive Sources = 01 nos. each tool
  - b) Radioactive Source Containers = 01 nos. each source +01 spare container  
\*\* ( i.e., total 03+01 nos.)
  - c) Radioactive Source Handling tools = 08 nos.
  - d) Radioactive Source catcher = 03 nos.
- 12.9.9** Bidders must offer De-Centralizers any accessory etc. for logging in hole sized from 17.1/2"
- 12.9.10** to 8.1/2"OD 17.1/2" (De-Centralizers Quantity-01 nos. per tool and any other item required for smooth and successful operation to be offered in requisite quantity ) . For logging in 6" hole size separate slim De-Centralizers any accessory suitable for smaller borehole operation etc. must be quoted ( De-Centralizers total Quantity-02 nos. against 3

sets of tool, and any other item required for smooth and successful operation to be offered in requisite quantity ).

**12.9.11** Any Cross Over Sub if required to run the in tool standalone mode should be provided.

**12.9.12** All items / assemblies for the tool should be quoted individually

**\*\* BIDDERS MUST QUOTE ADDITIONAL ONE NO OF EMPTY RA CONTAINERS TO BE MOUNTED ON EACH UNIT INSIDE THE RA STORAGE COMPARTMENT.**

## **12.10 NATURAL GAMMA RAY TOOL**

**QUANTITY = 04 NUMBERS**

### **Minimum Technical Specification:**

- 12.10.1** The tool should use high resolution scintillation detector and should be combinable with all the Open Hole logging tools and the performance should not be affected in such combination.
- 12.10.2** The tool should be calibrated in API with measuring range of 0 to 500 API with an accuracy of (+/-) 5 API units **or (+/-) 5%, whichever is greater**
- 12.10.3** Should be able to log boreholes of diameter from 6 inches to 20 inches (approx.).
- 12.10.4** Base Calibration system, sleeves (if any) and other accessories, and Onsite test equipment / jigs for the tool check should be provided, Quantity = 04 set each.
- 12.10.5** All items / assemblies for the tool should be quoted individually.

**NOTE7 : If the bidder's supplied Telemetry tool (clause 12.16) comprises an inbuilt GR section which is compatible with all downhole services , bidder may not quote additional GR tool against above clause 12.10. However, if the tool offered in clause 12.16 is without GR section than NGR tool mentioned as per clause 12.10 must be provided.**

## **12.11 ARRAYTYPE INDUCTION RESISTIVITY TOOL**

**QUANTITY = 03 NUMBER**

### **Minimum Technical Specification:**

The tool should be an array type induction resistivity tool with multiple depths of investigation for generating shallow to deep resistivity logs.

**12.11.1** The tool should be capable of recording of at least 5 radial resistivity curves and capable to measure minimum resistivity from 1 to 1000 ohm-m.

**12.11.2** Tool must have Vertical Resolution of 1ft, 2ft or 4ft

**12.11.3** The tool must have Radial Depth of investigation 10 to 90 inches or more (i.e. 10", 20", 30", 60" & 90").

**12.11.4** Tool must be able to record in Hole sizes 6 inches to 17.1/2 inches or more.

**12.11.5** The Array Induction Resistivity Tool must be able to run with MSFL tool supplied in clause 12.7

**12.11.6** The skin effect correction should be applied on actual measurement in real time.

**12.11.7** The tool should have built-in capability to record SP signal simultaneously.

**12.11.8** Shop calibration jigs/loops and on-site test equipment, if any, should be quoted separately, Quantity=02 nos.

**12.11.9** Bidders must offer Centralizers, Low Friction or Low contact Area Stand-off, etc. for logging in hole sized from 17.1/2" to 8.1/2" OD ( Centralizers Quantity-02 nos. per tool if required, Stand-off Quantity-10 nos. per tool and any other item required for smooth and successful operation to be offered in requisite quantity ) . For logging in 6" hole size separate slim

Centralizers, Low Friction or Low contact Area Stand-off suitable for smaller borehole operation etc. must be quoted (Centralizers total Quantity-03 nos. against 3 sets of tool if required , Stand-off Quantity-10 nos. against 3 sets of tool and any other item required for smooth and successful operation to be offered in requisite quantity ).

**NOTE:- If same centralizer/stand-off are offered elsewhere in tender then it may not be quoted separately.**

**12.11.10** All items/assemblies of the tools should be quoted individually.

**12.11.11** Well-site log products must include Invasion Images / **Profile**, Raw curves, Resistivity profiles at 10",20",30",60",90" for different vertical resolution, Rt, Rxo, flushed zone diameter and invaded zone diameter

**12.11.12** Necessary software for processing the tool measurements with environmental correction sand invasion profile in color code should be quoted.



## **12.12 SONIC TOOL WITH CBL/VDL CAPABILITY OR EQUIVALENT**

**QUANTITY = 03 NUMBER**

### **Minimum Technical Specification:**

- 12.12.1** The tool should be an acoustic logging tool with multiple transmitters and receivers designed to carry out borehole compensated compressional slowness measurements. The tool must also be able to perform cement evaluation in casing.
- 12.12.2** The tool should be capable of recording full waveform data, waveform amplitude, slowness and arrival time in both open-hole and cased-hole applications.
- 12.12.3** Tool should be able to produce compressional travel time ( $\Delta T$ ) in open holes to derive sonic porosity, time-depth correlation etc.
- 12.12.4** The tool must be able to measure: Transit Time in Open Hole:  $40\mu s/ft$  -  $190\mu s/ft$  or better, CBL Acoustic amplitude (3' T-R spacing): 0 to 100mV, Variable Density Log (5' T-R spacing): 200 to 1200 $\mu s$
- 12.12.5** The tool should record and display the following log curves:
- 12.12.5.01** Individual receiver travel time.
  - 12.12.5.02** Formation Travel time computed from 3' and 5' receiver.
  - 12.12.5.03** Integrated travel time.
  - 12.12.5.04** Amplitude of 3' receiver for Cement Bond Log in Cased Holes.
  - 12.12.5.05** Variable Density Log (VDL) from 5' receiver in Cased Holes.
- 12.12.6** The tool should be combinable with CCL and Gamma Ray Tools to record CBL/VDL/GR/CCL log in the same run. For this purpose, necessary Gamma Ray tool and CCL tool should be provided, Quantity = 03 nos. each  
If NGR tool or Telemetry tool (with in-built GR) in above clause have GR section which is capable of recording log with above service additional GR may not be quoted here.

**12.12.7** Gain and threshold adjustments should be based on latest principles.

**12.12.8** Over-body Centralizers/In-line Centralizers should be provided for recording CBL/VDL/GR/CCL log in 5" liner, 5-1/2", 7" and 9-5/8" casing. Quantity to be offered against 04 sets of tool as per the following table:

Centralizer for 5" liner	08 nos.
Centralizer for 5-1/2" liner	12 nos.
Centralizer for 7" liner	08 nos.
Centralizer for 9-5/8" liner	08 nos.

**12.12.9** Bidders must offer Centralizers, Low Friction or Low contact Area Stand-off, etc. for logging in hole sized from 17.1/2" to 8.1/2"OD ( Centralizers Quantity-02 nos. per tool if required, Stand-off Quantity-04 nos. per tool and any other item required for smooth and successful operation to be offered in requisite quantity). For logging in 6" hole size separate slim Centralizers, Low Friction or Low contact Area Stand-off suitable for smaller borehole operation etc. must be quoted ( Centralizers total Quantity-03 nos. against 3 sets of tool if required , Stand-off Quantity-06 nos. against 3 sets of tool and any other item required for smooth and successful operation to be offered in requisite quantity ).

**NOTE:- If same centralizer/stand-off are offered elsewhere in tender then it may not be quoted separately.**

**12.12.10** 7" pressurised Shop Calibration pipe for CBL/VDL mode = 01 no. Other onsite test equipment/jig for tool check should be provided, if any. Quantity = 02 sets.

**12.12.11** Any other accessories required for the tool should also be provided.

**12.12.12** All items / assemblies of the tool should be quoted individually.

<b>12.13 TOOL FOR CEMENT EVALUATION AND PIPE INSPECTION OR EQUIVALENT</b> <b>QUANTITY = 02 NUMBER</b>
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**Minimum Technical Specification:**

**12.13.1** Tool (Single or combination of tools) should provide simultaneous cement evaluation and pipe inspection in Cased Holes in one single logging run.

**12.13.2** The tool must have an interchangeable **head (optional)** that rotates a full 360 degrees or measures in multiple angular segments to generate 360 degrees cement map in cased hole using high frequency acoustic transducer. The cement image must be oriented with respect to high side-low side of the wellbore.

**12.13.3** The tool must be capable of Cement Evaluation (acoustic impedance image with resolution to distinguish liquid, cement slurry behind casing) and Casing Inspection (both Thickness and inside Diameter) for casing/liner size 5 inches, 5.1/2 inches, 7 inches and 9.5/8 inches size, for vertical wells and wells with deviation upto 45 degrees. (NOTE: Bidder offering a tool with interchangeable heads must offer rotating heads for 5-5.1/2 inches, 7 inches and 9.5/8 inches size casing/liner as part of the main equipment)

**12.13.4** During cement evaluation the tool should be able to Identify cement channels or voids of width 1.25 inches or more.

**12.13.5** The tool must provide 360 deg map of Internal Casing corrosion identification, Casing internal ID in 5", 5.1/2", 7" & 9.5/8" casing/liner size.

**12.13.6** The tool must have self-calibration system.

**12.13.7** Necessary Centralizers for Cased Hole applications should be provided for 5" Liner and Casing sizes 5-1/2", 7" & 9-5/8" casing. Quantity to be offered against 02 sets of tool as per the following table:

Centralizer for 5" liner	06 nos.
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Centralizer for 5-1/2" liner	08 nos.
Centralizer for 7" liner	06 nos.
Centralizer for 9-5/8" liner	06 nos.

**NOTE:-** If same centralizer are offered elsewhere in tender then it may not be quoted separately.

**12.13.8** Shop calibration system and onsite test equipment/jig for tool check should be Provided, if any, quantity = 01 set for each Tool

**12.13.9** Any other accessories required for the tool should also be provided in requisite quantity.

**12.13.10** All items / assemblies of the tool should be quoted individually.

**12.13.11** Bidder may quote one or combination of tools. If Additional tools (more than one tool against the service) are quoted by bidder for cement evaluation and corrosion inspection covering the entire range of casing sizes and grades mentioned in clause 12.13.4, then these tools must be of high-resolution measurements type.

**12.13.12** All Processing software (with license key) for data processing and interpretation has to be quoted with the tool.

**NOTE 8:** Bidder must quote for stronger centralizers (01 set each for 5.1/2", 7" & 9.5/8")additionally for running the above tool in high deviation wells to ensure better tool centralization.

**NOTE9:** The bidder must quote for GR & CCL Tools necessary with above service. However, if similar GR tools or GR section in-built within telemetry tool are quoted and these tools are compatible with the Acoustic Cement Evaluation and Pipe Inspection tool service, bidder may not quote for additional GR tools here.

## **12.14 HIGH PRECISION BOREHOLE DEVIATION SURVEY TOOL**

**QUANTITY = 02 NUMBER**

### **Minimum Technical Specification:**

- 12.14.1** The deviation survey tool must have measurement sensors consisting of 3 Accelerometers and 3 Magnetometers.
- 12.14.2** The tool should be able to provide borehole directional data to calculate and plot the well path.
- 12.14.3** The tool should be able to run either independently or in combination with other tools.
- 12.14.4** The tool must have high sample rate three-axis accelerometers and three-axis magnetometers to provide borehole azimuth, magnetic tool face, gravity tool face, hole inclination etc.
- 12.14.5** The tool must have very high Azimuth accuracy of +/- 10 deg @ 7.5 deg inclination and +/- 4deg for inclination > 20 deg.
- 12.14.6** The tool must have very high Inclination accuracy of +/- 2 deg @ 7.5 deg inclination and +/- 1 deg for inclination > 20 deg.
- 12.14.7** The tool must be able to run with wire-line & pipe conveyed assemblies for measuring deviation & azimuth (open hole only).
- 12.14.8** Necessary centralizers for logging the tool in open hole from 6" to 20" OD should be provided, quantity = 02 sets.
- 12.14.9** Shop calibration system and onsite test equipment/jig for tool check should be provided, quantity = 02 set.

**12.14.10** Any other accessories required for the deployment independently or in combination should also be provided.

**12.14.11** All items / assemblies of the tool should be quoted individually.

## **12.15 THROUGH TUBING RESERVOIR MONITORING TOOL WITH GR & CCL**

**QUANTITY = 01 NUMBER**

The Through Tubing Reservoir Monitoring Tool (RMT) with accessories should be capable of logging using 7/32" and 5/16" OD mono-conductor cables. The tool should be able to provide behind casing hydrocarbon saturation, estimate porosity, identify mineralogy, detect flow with direction of water inside and behind casing. The tool must be able to log in inelastic capture mode, capture sigma mode, sigma modes.

Bidders must quote the above tool with a portable surface system, complete calibration system and other accessories required for logging.

### **Minimum Technical Specification:**

- 12.15.1** Tool Outer Diameter suitable to operate through 2.7/8" Tubing having 2.44 inch ID.
- 12.15.2** The tool must be rated for minimum 103 MPA (15,000 PSI) pressure and 148.8 Degree C (300 Deg F) temperature. The tool must withstand the maximum rated pressure and temperature for a minimum period of one hour of continuous exposure.
- 12.15.3** The tool must be able to operate in at least the following independent modes: Carbon-Oxygen, Sigma and Oxygen Activation providing different independent measurements.
- 12.15.4** The tool should have an electronic neutron generator to produce 14Mev Fast Neutrons with high resolution **3- detector** based Spectroscopy measurement system.
- 12.15.5** The Reservoir Monitoring Tool must run on mono-conductor wireline of sizes 7/32" and 5/16" OD.
- 12.15.6** All data from the tool should be transmitted in a digital format to surface (downhole digitization).
- 12.15.7** Should be able to log in Casing/Tubing Sizes of OD in the range from 2.875 inches to 9.625 inches
- 12.15.8** The Tool must have vertical resolution of 30 inches or better.

- 12.15.9** The measurement range for the tool should be in formations having porosity > 10% porosity.
- 12.15.10** The Reservoir Monitoring tool should provide the following minimum measurements:-
- (i) C/O Ratio, Ca/Si ratio, decay Sigma.
  - (ii) Measurements to determine oil, gas and water saturation in formation with low/mixed and unknown water salinity, measurement of formation porosity, identification of mineralogy and lithology.
  - (iii) Quantification of Water, Oil and Gas saturation behind casing.
  - (iv) Water flow velocity using Oxygen Activation principle (up and down flows behind pipes or inside casing in station mode.)
- 12.15.11** The tool must be able to log in flowing and static condition.
- 12.15.12** Tool must provide run-time quality checks.
- 12.15.13** If the tool does not have in-built GR & CCL sections, then separate GR and CCL tools as per specifications given below and compatible with the Reservoir Monitoring Tool must be quoted, Quantity=01 set for each tool.
- 12.15.14** The Reservoir Monitoring Tool must also be able to run with OIL's existing Logging Units using 5/16" and 7/32" OD mono-conductor cable.
- 12.15.15** GR Tool (Range 0 – 500 API), if separate, must be compatible with the offered Reservoir Monitoring Tool and CCL tool to run all together in the wells.
- 12.15.16** CCL Tool, if separate, must be compatible with the offered Reservoir Monitoring Tool and GR tool to run all together in the wells.
- 12.15.17** The GR & CCL tool must be able to record GR & Casing Collars in Casing/Tubing sizes 2.875 inches to 9.625 inches OD.
- 12.15.18** Shop Calibration system and all onsite Verifier/Jigs (if any) for tool check must be quoted, Quantity=01 no.

**NOTE:-**If the calibration unit required is same as the Neutron tank offered with Neutron tool, then **"NO"** additional calibration tank to be offered. For the GR section of the RMT tool (either in build or not) one no. of calibration unit must be supplied, if the same calibration unit is not supplied elsewhere.



- 12.15.19** Accessories needed to carry out logging up to 45 degrees deviation wells, for example- [i] Centralizers [ii] Tool bottom terminator/ Bull plugs [iii] tool body rollers etc. must be quoted, if required Quantity= 01 set for each Tool.
- 12.15.20** All items/sub-items of the tools required for successful logging must be quoted, Quantity=01 set for each Tool.
- 12.15.21** Bidder must quote a spare GR and CCL tool (Quantity -01 set for each Tool) as spare, compatible with the above TT-RMT.
- 12.15.22** All items / assemblies for the tool should be quoted individually item wise.
- 12.15.23** The **Portable Logging System (Inside rugged boxes)** should be latest generation state-of-art system, support multitasking, must be able to control logging operations/calibration for the Reservoir Monitoring Tool, carry out data acquisition, data processing and other related functions. The system should work on latest operating systems like Windows, UNIX, LINUX etc.
- 12.15.24** The portable surface acquisition unit must be capable of interfacing with mono-conductor logging cable **directly**. It must be a field proven, latest version **PORTABLE Logging System** for logging.
- 12.15.25** The portable surface system should comprise of tool interface and power supply panel, a host computer, a printer and an independent depth/ line speed/line weight panel.
- 12.15.26** Change over from OIL's existing truck system to the Portable system must be **easy and user-friendly**. Suitable cables for routing depth and tension data should be provided in adequate nos.
- 12.15.27** The host computer must be latest generation rugged Laptop computer system for Logging control, data acquisition and data processing, data record, playback, editing, calibrating & plotting purposes.
- 12.15.28** **PORTABLE LOGGING SYSTEM SOFTWARE (QTY=01)**

The logging acquisition software must have the following minimum features:

- 12.15.29** The system application software should be of latest version. Software should be menu driven; user friendly with multi-tasking capability.

- 12.15.30** The system must be capable of converting log data into API standard LIS, ASCII (LAS) and other standard formats.
- 12.15.31** The system software must include automatic depth correction
- 12.15.32** The system software must display real-time corrected depth and line tension.
- 12.15.33** Record real-time and playback on thermal paper/film in different depth scales i.e., 1/20, 1/40, 1/100, 1/200, 1/1000 in metric system in API format.
- 12.15.34** The application software must apply borehole and environmental corrections during logging.
- 12.15.35** The application software must produce quick look basic processing of RMT data at well-site with colour images.
- 12.15.36** Diagnostic software for the surface system as well as for the RMT tool must be provided.
- 12.15.37** Details of the software along with price break up for each module (if any) should be provided.
- 12.15.38** Backup copies of all loaded software shall be supplied in CD / DVD format.
- 12.15.39** Oil India Limited's logo must be incorporated in all log printout and processed output.
- 12.15.40** The bidder should give an undertaking to support licensing for the software originally supplied for a minimum period of 10 years from the date of commissioning of the unit.
- 12.15.41** Bidders should offer undertaking for free periodic updating / upgradation of the Software for a minimum period of 10 (ten) years from the date of commissioning of the unit.

**NOTE 10: Whether mentioned specifically or not, any other processing software (with License Key) for onsite data have to be provided for successful operation with the portable system.**

## **12.16 TELEMETRY CARTRIDGE TOOL**

**QUANTITY = 04 NUMBER**

### **Minimum Technical Specification:**

**12.16.1** The downhole telemetry tool should have the capacity to transmit data from a combination of tools.

**12.16.2** The tool should work on latest digital data telemetry system with error checking capability during transmission.

**12.16.3** Tool test equipment, calibration equipment, if any, should be provided.

**12.16.4** All items / assemblies for the tool should be quoted individually.

**NOTE 11:** Bidder may quote Telemetry Cartridge tools that have inbuilt GR for Natural gamma-ray detection preferably, borehole inclination measurement section etc., if available with bidder. The GR section must provide total GR log of API standard.

## **12.17 DOWNHOLE TENSION DEVICE TOOL**

**QUANTITY = 04 NUMBER**

### **Minimum Technical Specification:**

- 12.17.1** To monitor and record downhole wireline tension/compression.
- 12.17.2** Tool should be combinable with all other open hole downhole logging tools.
- 12.17.3** The tool must be deployable with pipe conveyed logging services.
- 12.17.4** The tool may have sensor for borehole temperature measurement(optional)
- 12.17.5** Shop and wellsite calibration system and test equipment, if any, should be provided.
- 12.17.6** All items / assemblies for the tool should be quoted individually.

**12.18 SIDE WALL CORING (PERCUSSION TYPE) TOOL WITH SHOOTING GR  
TOOL&CONSUMABLESQUANTITY = 04 NUMBER**

**Minimum Technical Specification:**

- 12.18.1** The Coring Gun should have the capability to take at least 24 numbers of cores selectively in one single run. The Gun assembly should have provision to record Gamma ray in the same run for depth correlation.
  
- 12.18.2** Separate high-resolution scintillation shooting Gamma Ray tool compatible with the core gun for tool positioning, should be provided, quantity = 04number
  
- 12.18.3** Bidder must offer 02 nos. of calibration unit against 04 nos. of CST-Shooting GR tool. However, if bidder offers same calibration units for GR tool anywhere in the tender then above calibration units may not be quoted.
  
- 12.18.4** Should be capable of coring in hole size 6 to 12.25 inches. However, bidder must provide required accessories to acquire core plugs in wash-out sections up to 20" OD.
  
- 12.18.5** Details of equipment necessary for gun assembly and loading should be provided
  
- 12.18.6** All accessories for the gun to retrieve sidewall cores in medium and hard formations are to be provided
  
- 12.18.7** Break-up of explosives and accessories for 50 jobs @ 24 cores each to be provided as indicated in clause 12.28
  
- 12.18.8** All items / assemblies for the tool should be quoted individually

**12.19 STANDARD WIRELINE CABLE GUIDED, OPEN ENDED FISHING**  
**EQUIPMENT&SIDE DOOROVERSHOTFISHING TOOLQUANTITY = 02**  
**NUMBER EA**

- 12.19.1** The bidder must provide fishing kit (Bowen or Equivalent) for downhole tools for **open ended fishing, cut-n-thread fishing** and **160 series Side Door Overshot.**
- 12.19.2** Fishing overshoot should be complete with assembly along with extension sub and suitable crossover to regular drill pipe for open ended fishing operation in hole sizes from 6" (Slim hole), 8.1/2", 12.1/4" & 17.1/2". Offered overshoot to be supplied with both Basket & Spiral grapple compatible with cable head fishing neck and fish body below cable head must be provided – QTY 10 nos. each.
- 12.19.3** Fishing overshoot should be complete with assembly along with extension sub and suitable crossover to regular tubing (N-80, P110 etc.,) for open ended fishing operation in casing/liner sizes from 5.1/2", 7" and 9.5/8" OD.
- 12.19.4** Standard cable guide assembly for cut and thread fishing job for slammer cable. The equipment shall consist of cable guided overshoot and suitable spear head along with all other accessories required for cable guided fishing operation. Along with above, bidder must provide Slips for slammer cable compatible with cable guide assembly sufficient for 20 operations.
- 12.19.5** Circulating sub and other crossover subs (if any) must be provided for **3-1/2" OD DP (15.5 ppf) with 3.1/2" IF & 5" OD DP (19.5 ppf) with 4.1/2" IF**
- 12.19.6** For the fishing kit, item-wise complete list of all the parts with respective Part Number must be quoted.
- 12.19.7** Bidder must quote Bowen or equivalent make 160 series Side Door Overshot fishing tool used to eliminate the necessity of cutting the stuck open hole line. The side door overshoot

should be complete with bowl, grapple, grapple control and any other items. Bidder to quote 10 nos. of grapple compatible with cable head (if the grapple are of different size from clause 12.19.2)

**12.19.8** Bidder must quote Splicing Kit with required hand tools adequate for 20 nos. of splicing job for Slammer Cable .

**NOTE13: Bidder MUST quote all the components in order to make the fishing equipment list complete for fishing of logging tools both in open hole and cased hole environment.**

## **12.20ELECTRICALLY RELEASEABLE CABLE HEAD (For Multi-conductor)**

**QUANTITY = 02 NUMBER**

The multi-conductor electrically releasable cable head is required for pulling higher tensions on tool strings to prevent tool stuck situations.

### **Minimum Technical Specification:**

- 12.20.1** The tool must have electrically controlled weak point operation having either a fusible latch assembly or an electric motor for controlled release of logging tool.
- 12.20.2** The electrically releasable cable head tool **shall** have an inbuilt load cell(**optional**)
- 12.20.3** Though RWCH is electrically activated design, it must have the ability to pull to the safe working load of the cable (12,000 lbs for Slammer cable) for any operation without getting mechanically separated from Logging tool unintentionally; i.e., the contingent tensile-bar mechanical weak point as mentioned in clause 12.20.5 should not trigger at 50% Slammer Cable breaking strength
- 12.20.4** The tool controlled from surface must be suitable safety to avoid unintentional activation from surface.
- 12.20.5** The tool should include a contingent tensile-bar type mechanical weak point in case of failure of electrical integrity of the wire line does not allow release of cable head.
- 12.20.6** Bidder must quote one complete fusible type latch assembly/electric motor assembly used in the tool as spare item. The spare set quoted must be a complete assembly.
- 12.20.7** Tool **shall** be equipped with redundant circuitry and conductor utilization for maximizing reliability of tool operation (**optional**)



**12.20.8** All items / assemblies for the tool should be quoted individually

**12.21 SPECTRAL GAMMA RAY TOOL OR EQUIVALENT**

**QUANTITY = 01 NUMBER**

**Minimum Technical Specification:**

**12.21.1** Tool should be able to measure total and corrected natural gamma ray to assess Thorium (Th), Uranium (U) and Potassium (K) components. It would also provide the ratios of Th/U, U/K and Th/K.

**12.21.2** The tool should be combinable with all the Open Hole logging toolstand the performance should not be affected in such combination

The tool should be API calibrated with minimum measuring range of 0 to 1000API, with an accuracy of (+/-) 5 API units.

The measuring range of Uranium and Thorium should be 0-40 PPM having +/- 4% accuracy of the measured value.

**12.21.3** Should be able to log boreholes of diameter from 6 inches to 20 inches(approx.)

**12.21.4** Base Calibration system, simulators, sleeves (if any) and other accessories, and onsite test equipment / jigs for the tool check should be provided, quantity = 01 set. If the bidder has quoted above calibration unit elsewhere in the tender the same may not be quoted against the clause.

**12.21.5** All items / assemblies for the tool should be quoted individually

## **12.22 SHEAR SONIC IMAGER TOOL WITH CROSS-DIPOLE**

**QUANTITY = 02 NUMBER**

### **Minimum Technical Specification:**

- 12.22.1** The tool must have one monopole and two dipole transmitters.
- 12.22.2** The acoustic tool must provide real-time Compressional, Stoneley, Slow and Fast shear wave travel times and their orientation in the formation.
- 12.22.3** The tool must be able to deliver monopole and dipole measurements in consolidated & unconsolidated formations ( $\Delta t_c > 250 \mu\text{s/ft}$ ,  $\Delta t_s > 1200 \mu\text{s/ft}$ ) in one pass.
- 12.22.4** The tool must be able to log in borehole size from 6 inch to 17.5 inch dia.
- 12.22.5** The Processing software with the tool must be able to evaluate Compressional, Shear ( both X & Y direction) and Stoneley slowness with integrated travel time,  $V_p / V_s$  , Geo-mechanical properties viz. Young, shear and bulk modulus, Poisson's ratio, etc. Processing software must evaluate formation anisotropy, Borehole stability analysis and prediction of safe mud window, Permeability from Stoneley wave, Stoneley fracture identification.
- 12.22.6** Any ancillary tools (4 arm calliper and deviation tool) required with shear sonic imager tool for acquiring above tool data must be quoted with the shear sonic imager tool under the above clause.
- 12.22.7** Bidder must quote all necessary calibration equipment, accessories, and centralizers, if required against the tool.
- 12.22.8** The tool must be combinable with most open-hole services and compatible with main conveyance modes Wireline.

**NOTE 14:**If Deviation tool quoted under clause 12.14 is compatible for logging with Shear Sonic Tool mentioned above, bidder may not quote a deviation tool with above shear sonic tool.

**NOTE 15:** Any other accessories required for the tool should be quoted line item wise.

**12.23OPTIONAL TOOL (SHALL NOT BE EVALUATED)**

**ELEMENTAL CONCENTRATION SPECTROSCOPYTOOL**

**QUANTITY=01 NO.**

**Minimum Technical Specification:**

- 12.23.1** The tool should measure elemental yields for mineralogical evaluations in open holes or cased hole.
- 12.23.2** Bidder's Elemental concentration spectroscopy tool should measure relative elemental yields using either a chemical Am-Be neutron source or a pulse neutron generator and a very high resolution detector for measurement.
- 12.23.3** The elemental concentration spectroscopy tool must be based on neutron-induced capture gamma ray spectroscopy to derive elemental contributions contained within the total measured gamma ray energy spectrum.
- 12.23.4** The tool must be able to output concentration of elements from neutron induced Gamma ray spectrometer for the determination of Silicon, Calcium, Iron, Gadolinium, Titanium, quartz, feldspar, mica (QFM) composite and other minerals for accurate clay volume estimation and clay typing.
- 12.23.5** The bidder must provide software modules for post-processing of tool data to compute lithology from elemental concentration log spectra from corrected clay model or equivalent and dry weights. The generated output should be in TIF/PDS/PDF & LAS file.

- 12.23.6** The elemental concentration tool must be able to log in hole sizes from 6" to 17 ½" diameter or more.
- 12.23.7** All necessary calibration equipment, accessories, centralizers/decentralizers must be quoted, if required along with tool.
- 12.23.8** Bidder must quote necessary RA sources, if required for logging with above tool.
- 12.23.9** The tool must be rated for minimum 18000psi and minimum 350 deg F.
- 12.23.10** The tool must be combinable with most open-hole services and compatible with main conveyance modes Wireline.
- 12.23.11** Bidder must quote 01 no. complete Neutron Detector as spare used inside above tool along with 01nos. of all PCBs used inside the tool. Bidder must also quote 01 no. of electronic Neutron generator, if used in tool.
- 12.23.12** Bidder should also quote all spares and consumables used with above tools for 50 runs of operation.
- 12.23.13** Bidder has to give **rate reasonability** of the Elemental Concentration Spectroscopy Tool prices for "similar" tools quoted with its software processing modules, which it has sold to other E&P companies in India/ outside India during last 5 years prior to the date of Tender opening. For this purpose the bidder must provide documentary evidence showing Quote of the equipment sold, Bill of Loading/Consignment/ Successful Commissioning Report. OIL reserves the right to purchase Optional tools for which rate reasonability is established as per the above methodology.

DEF of "SIMILAR" TOOLS: Means Elemental Concentration Spectroscopy tool based upon same principle of measurement.

## 12.24 COMBINABILITY OF LOGGING TOOLS:

The tools should be able to run independently and also in the following combinations.

S/N	TOOL COMBINABILITY OF OFFERED TOOLS
1.	Array Laterolog + Gamma ray
2.	Array Laterolog + Micro spherically focused log + Gamma ray
3.	Array Induction Log + Gamma ray
4.	Array Induction Log + Micro spherically focused log + Gamma ray
5.	Compensated Spectral Density Tool + Gamma ray
6.	Compensated Neutron Porosity Tool + Gamma ray
7.	Compensated Spectral Density Tool + Compensated Neutron Porosity Tool + Gamma ray
8.	Borehole compensated Sonic Tool + Gamma ray
9.	Borehole compensated Sonic Tool + Compensated Spectral Density Tool + Compensated Neutron Porosity Tool + Gamma ray
10.	Borehole compensated Sonic Tool (CBL mode) + Gamma ray/ Spectral Gamma Ray
11.	Borehole compensated Sonic Tool (CBL mode) + Gamma ray/ Spectral Gamma Ray + CCL Tool
12.	Acoustic Pipe Inspection and Cement Evaluation Tool + Gamma Ray / Spectral Gamma Ray
13.	Acoustic Pipe Inspection and Cement Evaluation Tool + Borehole compensated Sonic Tool (CBL mode)(if required) + Gamma Ray / Spectral Gamma Ray + CCL
14.	Borehole deviation Survey Tool + Gamma ray
15.	Array Induction Log + Compensated Spectral Density Tool + Compensated Neutron Porosity Tool + Gamma ray/Spectral Gamma
16.	Array Induction Log + Compensated Spectral Density Tool + Compensated Neutron Porosity Tool + Borehole compensated Sonic Tool + Gamma ray/Spectral gamma
17.	Array Laterolog + Micro spherically focused log + Compensated Spectral Density Tool+ Compensated Neutron Porosity Tool + Gamma ray/Spectral gamma
18.	Array Laterolog + Micro spherically focused log + Compensated Spectral Density Tool + Compensated Neutron Porosity Tool + Borehole compensated Sonic Tool + Gamma Ray/Spectral Gamma
19.	Shear Sonic imager tool with Cross Dipole+ Gamma Ray/Spectral Gamma

20.	Shear Sonic imager tool with Cross Dipole+ Compensated Spectral Density Tool + Compensated Neutron Porosity Tool+ Gamma Ray / Spectral Gamma
21.	Elemental Concentration Tool (optional) + Compensated Spectral Density Tool + Compensated Neutron Porosity Tool+ Gamma Ray / Spectral Gamma
22.	Array Induction Log +Borehole compensated Sonic Tool + Elemental Concentration Tool (optional) + Compensated Spectral Density Tool + Compensated Neutron Porosity Tool+ Gamma Ray / Spectral Gamma

**12.25 SYSTEM UPGRADATION CAPABILITIES:**

Although the logging unit with its surface system is basically needed for the basic / essential logging operations using the above-mentioned downhole tools, it must have the capacity to be upgraded for the following specialized logging operations including processing. System capability for carrying out specialized logging surveys through up-gradation is mandatory, **if same bidder is nominated to provide below tool technology**. Specialized surveys for which, the offered system must have up-gradation capability are as follows

**12.25.1** MRIL/CMR MRIL/CMR/**MREX**

**12.25.2** Slim Quad Combo tools

**12.26            COMPUTER SYSTEM FOR LOG DATA PROCESSING &  
INTERPRETATION AT BASE:**

**Minimum Specifications:**

- 12.26.1** Log data processing and interpretation software packages for Through Tubing Reservoir Monitoring tool, Shear Sonic Imaging Tool, Elemental Concentration Spectroscopy Tool (if optional tool is offered) must be quoted.
- 12.26.2** The bidder must provide Post DATA PROCESSING & INTERPRETATION Software to process RMT logging data for the following:
- [a] Quantification of oil, gas and water saturation behind casing.
  - [b] Identify fluid contacts.
  - [c] Porosity estimation.
  - [d] Identification of mineralogy and spectrolith analysis.
  - [e] Water flow and its direction inside and behind casing.

**NOTE16:** The Data processing and Interpretation System must be of Latest version having required software packages/modules with **license keys**.

- 12.26.3** The Data processing system hardware should consist of single user computer system with accessories, supporting the above mentioned software packages. The system should have at least 02 (two) 19" Monitors (TFT type preferably). One UPS should be provided with the system. The system should run on 220 volts AC / 50 Hz power source.
- 12.26.4** Continuous Printers (02 nos.) capable of printing high resolution color logs and other computed results.
- 12.26.5** There should be CD/DVD read/write and USB portable Hard drive for data transfer and storage



**12.26.6** Consumables like Paper, ink cartridges/toner etc. sufficient for 100 data processing jobs of 500 meters interval each should be provided.

**12.26.7** Software supplied for data processing & interpretation should be capable of accepting competitors tool data required for interpretation

**NOTE 17:** Details of all the hardware and software along with individual price break-up required for a full-fledged computer centre at Base for log data processing and interpretation should be provided in all details. **OIL reserves the right to select the requisite software and hardware modules from list of offered software.**

**NOTE 18:** Any other processing software (with License Key) required for post processing of Reservoir Monitoring Tool log data have to be provided. Processing software found not supplied by bidder during commissioning period of the equipment or on a later date, shall have to be supplied at no charge to OIL. (Bidder must provide above processing software which is capable of exploiting the functionality of the RMT 3-D tool)

**12.27 LAB SYSTEM FOR FAULT ANALYSIS AND REPAIR AND SUITABLE CONVECTION OVEN FOR TEMPERATURE TESTING OF TOOLS**  
**QUANTITY=01**

The bidder is required to quote the following:

**Minimum specifications:**

- 12.27.1** Independent Lab Test System for Testing Logging Tools & Equipment for the purpose of fault analysis and repair.
- 12.27.2** The system should be a complete one in terms of all necessary hardware and software with software licenses.
- 12.27.3** The system should be capable of powering up and acquiring data from logging tools and diagnosing/troubleshooting all the offered logging tools in the Maintenance Lab.
- 12.27.4** The system should have necessary provisions for opening and closing the calipers of the padded logging tools.
- 12.27.5** The system should be capable of playing back recorded log data with hardcopy output.
- 12.27.6** The Lab system should be a rack-mounted system for easy installation in the Maintenance Lab.
- 12.27.7** All other accessories like specialized hand tools for assembly/disassembly of logging tools, jumpers, break-out jumpers, cables, cable simulators, crimping tools etc. are to be provided, Quantity-02 each.
- 12.27.8** Bidder must also quote ONE no. of NON-MAGNETIC Forced-Air Oven (electric convection, 220V/50hz) featuring uniform hot airflow for qualification testing of down-hole electronic logging equipment supplied by bidder up to 350 deg F. The oven must provide consistent

performance with low maintenance. The heat chamber must be of minimum 12 ft length, having sufficient capacity to test the downhole electronic tools. The unit must have silicone door seals with positive latching clamps and should have protection against over temperature. The supplied unit should have precise temperature control for testing tool response with logging system connected to tools inside oven.

**12.27.9 All items / assemblies for the Lab system(each component both software and hardware /panel) should be quoted individually item-wise.**

**12.27.10** The Lab Non-magnetic Forced-air oven must be quoted as a separate line item with its required accessories.

**12.27.11** OIL reserves the right to procure the requisite modules.

**12.28****EXPLOSIVES, SPARE PARTS AND CONSUMABLES:**

Bidder must specify distinctly spares, consumables in a tool-wise manner along with required explosives, igniters for the SWC operation and quote them as per clause stipulations.

**All Items in clause 12.28.1 through 12.28.32 shall be considered for bid evaluation.**

**12.28.1** The bidder is required to quote all **explosives, spares, consumables and accessories (if any)** required for **50 runs of operation** for the following items. The quote must contain *Part Number, description of each item, recommended quantity for 50 runs of operation, unit price, and extended price* of each quoted item.

**12.28.1.a** Side Wall Core explosives & Operational Spares: Low Temp Powder charges/Core gun load explosives with compatible igniters (rated to minimum 350 degF & 18000 psi) must be quoted along with other core gun consumables, spares and accessories as per quantity specified below.

BIDDER MUST QUOTE INDIVIDUALLY ALL THE ITEMS REQUIRED for 50 runs of SWC operation (@ 24 shots per operation) - explosives, core barrels with caps, cutter rings, shear pins (brass type), Roll Pins, Retrieval cables (Length of cables should be 11"-13" maximum and must have breaking strength of 2300 lbs- 2900 lbs) , O-Rings, seals, anti-seize lubricants etc. used if any. Core gun barrels and explosives provided should be able to conduct SWC operations in SOFT, MEDIUM & HARD Formations. Suitable hardware provided should cater to Soft, Medium and Hard formations in equal quantity. The core plug retrieved should be of minimum 1" x 1 - 5/8" (SOFT formation) and minimum 1" x 11/16" (HARD formation) core size or more.

**Bidders must quote as per following quantities 50 runs of SWC items:-**

**SOFT Formation – For 10 Runs**

**MEDIUM Formation- For 20 Runs**

**HARD Formation – For 20 Runs**

**12.28.1.b** Bidder must quote spares and consumables required during Post Job Servicing of 50 runs of each tool offered in tool-wise manner (**clauses 12.6 through 12.22**).

(Items as Printed Circuit Boards, Tool Detectors, Tool Pads, Transmitters & Receivers etc. are NOT to be quoted against this clause).

**12.28.1.c** Spares used in Surface Logging System, if any

**(Bidder must NOT quote any Panel and PCBs against this clause)**

**12.28.1.d** Spares used for Fishing operations in Open Hole and Cased Hole

Bidder must quote requisite spare and consumables required during carrying out Fishing Operations such as Slips for Rope Socket (Slammer-0.474" Qty-10 EA), Liner for Cable Hanger (5/16", 7/32", 0.474" Qty-10 EA).

Bidders are asked to quote any other fishing spares deemed necessary for 20 runs of fishing operation.

**12.28.1.e** Spares and Consumables for Straight Line Depth Measuring head

Bidder must quote Measuring Wheels 02 sets, Encoders 02 sets, Load pin 03 nos., Tension Wheel 02 sets (if applicable), Guide rollers, bearings and any other items that undergo wear and tear with usage, sufficient for 50 operations.

**(PCBs are NOT to be quoted against this Clause)**

**12.28.1.f** Spares & Consumables for Cable Head and accessories which are used with downhole tools.

*Bidder must quote complete cable head spares and consumables.* Bidder must quote inner and outer cones with retainers (50 Qty EA) for multi-conductor cable if any, cable shoe with retainer (50 Qty EA) for mono-cable if any, all connector boots & sockets, socket contacts, Teflon sleeves, washers, pins, O-Ring if used, must be supplied in sufficient quantity for 50 jobs for both sizes of cable.

**12.28.1.g** Any other item, which the Bidder feels is required, but not mentioned in this clause.

***NOTE 19: The Bidder is expected to quote every item as mentioned in the above clause 12.28.1. Any item (consumable or accessory) NOT specifically quoted in the Bid for specified number / runs of operations and found to be required before completion of specified number / runs of operation, shall be supplied by the supplier FREE OF CHARGE TO OIL.***

**12.28.2** The Bidder is required to quote the following spares for the AC Power standby generator:

- a) Voltage regulator for Diesel generator - 02 nos.
- b) All type of filters used in standby Diesel generator (fuel filter, air filter and oil filter etc.): 20 nos. each
- c) Spark plugs – 02 sets
- d) Any other spares required for yearly periodic servicing – 10 nos each.

**NOTE 20:** *The Bidder is expected to quote every item as mentioned in the above clause 12.28.2 and hence to be very careful while quoting. Any item (consumable or accessory) NOT specifically quoted in the Bid and found to be required, shall be supplied by the supplier FREE OF CHARGE TO OIL.*

**12.28.3** For the roof mounted air-conditioners, the following spares must be quoted:

- a) Mounting gaskets – 10nos
- b) Mounting bolts and screws – 20 nos
- c) Filters – 30 nos
- d) Any other spares required for periodic servicing. – Qty required for 5 servicing to be quoted.

**12.28.4** The Bidder is required to quote the following:

All Printed Circuit Boards (PCB) present in each downhole tool offered against clause 12.6 to 12.22 must be quoted in the following quantities. (Power supply modules & HV modules are also to be included)

Sl. No.	Tool	Quantity
1	HIGH RESOLUTION LATEROLOG TOOL	1 set of PCB of each type
2	MICRO SPHERICALLY FOCUSED TOOL	1 set of PCB of each type
3	DENSITY LOGGING TOOL	1 set of PCB of each type
4	NEUTRON POROSITY TOOL	1 set of PCB of each type
5	NATURAL GAMMA RAY TOOL	1 set of PCB of each type
6	ARRAY TYPE INDUCTION RESISTIVITY TOOL	1 set of PCB of each type
7	SONIC TOOL WITH CBL/VDL	1 set of PCB of each type

8	TOOL FOR CEMENT EVALUATION AND PIPE INSPECTION	2 sets of PCB of each type
9	HIGH PRECISION BOREHOLE DEVIATION SURVEY TOOL	1 set of PCB of each type
10	THROUGH TUBING RESERVOIR MONITORING TOOL	1 set of PCB of each type
11	TELEMETRY CARTRIDGE TOOL	1 set of PCB of each type
12	DOWNHOLE TENSION DEVICE	1 set of PCB of each type
13	SIDE WALL CORING	1 set of PCB of each type
14	ELECTRICALLY RELEASEABLE CABLE HEAD	1 set of PCB of each type
15	SPECTRAL GAMMA RAY TOOL	1 set of PCB of each type
16	SHEAR SONIC IMAGER TOOL WITH CROSS-DIPOLE	1 set of PCB of each type

*(For example, if 5 nos. of circuit boards and 3 nos. of power supply boards are used in neutron logging tool, whether similar or different type, all the 5 circuit boards and 3 nos. of power supply boards must be quoted).*

**The quotation for the PCBs must be tool-wise.**

NOTE: The Bidder is expected to quote every item as mentioned in the above clause. If the Bidder fails to quote any of the above items in the bid but found to be a part of the equipment during five years from the date of successful commissioning of the equipment, the bidder must supply the same FREE OF CHARGE TO OIL.

**12.28.5** MSFL Pads similar to the ones fitted in the tool, quantity = 10 nos.

**12.28.6** Complete Detector assemblies (for straightaway replacement) must be quoted for the following tools:

- (i) Density Tool (dual detector assembly) , Qty = 01 no. detectors each
- (ii) Compensated Neutron Tool(dual detector assembly) , Qty = 01 no. detectors each
- (iii) Natural Gamma ray Tool, Qty = 01 no.
- (iv)Shooting GR tool for Side Wall core, Qty = 01 no.
- (v) Through Tubing Reservoir Monitoring tool (3 detector assembly) , Qty = 01 no detectors

each

(vi) Spectral Gamma Tool must be quoted, Qty = 01 no.

**12.28.7** Bidder must quote Neutron Generator (for straightaway replacement) for RMT tool;  
Qty= 01 no.

**12.28.8** Bidder should quote all PCBs used in portable RMT surface panel, Qty =01 no. each

**12.28.9** Selector Switch/ any hardware used for bullet selection for side wall core guns (if any), Qty = 02 nos.

**12.28.10** Bidder must offer the following spares for the offered Ultrasonic Pipe Inspection and Cement Evaluation Tool with Rotating Heads/Acoustic Padded type tools-

If bidder offers an ultrasonic pipe inspection and cement evaluation tool like

CAST/USIT it must quote the following as spares:

a) Rotating heads Qty = 01 no. each size (For 5.1/2" , 7" & 9.5/8" Casing sizes).

b) Spare transducers for the rotating scanner head : - Qty 03 numbers of each type of transducer (required for above casing sizes).

However, if the bidder offers multiple tools it must quote a complete Transmitter - Receiver sensor as spare (if 04 TX-RX sensors are fitted in all the tool arms, all 04 of these sensors must be quoted) used with the cement evaluation tool along with spare sensor section used in pipe inspection tool covering the complete range of measurement from 5.1/2" to 9.5/8" casing.

**12.28.11** Bidder offering acoustic sonic tool for cement evaluation and pipe inspection should provide complete spare motor assy.(if any) : - Qty 01 numbers

**12.28.12** Bidders must quote Transmitters and Receivers set for the Sonic Tool (clause 12.12),  
Qty = 01 set.



- 12.28.13** For the Cross-dipole Shear Sonic Imager Tool (offered against clause 12.22), bidder should quote one complete set of Receiver transducers. (For example, if there are 32 receivers in one tool, then 32 nos of receiver transducers must be quoted).
- 12.28.14** 10 nos. of each type of any Dynamic O-rings, if used in any of these tools.
- 12.28.15** 20 numbers of each type of O-ring used in each downhole tool (clause 12.6 to 12.22) which requires change after every run/post job servicing.
- 12.28.16** 50 numbers of each type of O-ring used in each downhole tool (clause 12.6 to 12.22) which requires change during carrying out PM2/tool assembly and disassembly.
- 12.28.17** Two times the number of Nuts, bolts, washers, roll-pin, lock-pin, connectors, different pins and boots, back-up rings etc. used in each downhole tool (clause 12.6 to 12.22).
- 12.28.18** Bidder must quote 05 nos. of wear pads/strips or any other items (if any) used in the Detector section of the density tool which prevent the detector body facing the formation from getting worn off.
- 12.28.19** Minimum 10 meters of thermal pads used in tool PCBs for heat dissipation must be quoted, if used in the tools.
- 12.28.20** Bidder must quote the following spares related to logging unit:
- a) Voltage regulator for hydraulic alternator – 06nos
  - b) Speed Controller module for hydraulic alternator - 03 Nos.
  - c) Controller module for Winch Hydraulics - 02 Nos.
  - d) Any other PCBs or electronic module required for winch and alternator operation – 01 nos each
  - e) Joystick for winch operation: 06 Nos.

**12.28.21** Bidder must quote individually two numbers of each slip-rings used for both wireline cables similar to the one fitted in unit as spare.

**12.28.22** Bidder to quote the following patching cables as spare:

- a) Spare cables between Slip Ring to bulkhead (weatherwall) same as fitted in the unit = 02 Nos. for each slip-ring.
- b) Spare cables used between measuring head to bulkhead (weatherwall) connector, similar to the one fitted in the logging units= 03 sets
- c) Spare patching cables used between bulkhead (weatherwall) to mud-pit reels, loadcell reels and grounding reels = 02 nos each

**12.28.23** Spare panels of all panels (same in all respects as fitted in logging unit) must be quoted in the following quantities:

- a) Shooting panel (if separate) – 01 nos.
- b) Un-interrupted power supply (UPS) – 02 nos
- c) Depth Tension (Hoistman) display – 02 nos.
- d) Power supply panels (for downhole tools) -- 01nos of each type.
- e) All other panels present in the logging system not mentioned above are to be quoted in quantity of 01 nos each.

***(Printers, rack-mounted computers/laptops and portable RMT panelare not to be quoted against this clause.)***

**12.28.24** Spare printers (same as fitted in logging unit) and printer consumables to be provided in the following quantities:

- a) Greyscale thermal printer (rack mounted) – 02 nos.
- b) Color log printer (rack mounted) – 02 nos.
- c) Greyscale printer thermal head – 10 nos.
- d) Ink/Toner for color printer- 10 nos.

**12.28.25** The following spares related to acquisition computer are to be quoted:

- a) Spare rack mounted surface computer for OH log acquisition similar to the one fitted in the logging unit with suitable licenses, the unit must be directly replaceable in case of any failure. –

01nos

b) Spare SMPS for Rack-mounted PC – 04 nos.

c) Spare graphics card for Rack-mounted PC – 03 (Three) nos.

**12.28.26** One number of Hydraulic driven AC generator (Alternator) exactly similar to the one installed in the logging unit is to be quoted as **SPARE** along with all controllers / accessories. In case of failure of the truck mounted generator, the spare generator must be able to replace it directly.

**12.28.27** One number of complete straight Line Measuring system, similar to the one installed in the logging unit, to be quoted as **SPARE** integrated with all the fitted components including depth encoders. In case of failure of the installed Depth Measuring system, the spare measuring head must be able to replace it directly.

**12.28.28** Four numbers of electrical roof mounted air conditioners, similar to the ones fitted in the logging unit, are to be quoted as spares.

**12.28.29** Bidder must quote ONE additional dehumidifier similar to one fitted in unit.

**12.28.30** Bidder must quote the following spare cable reels. These are in addition to those already installed in the logging unit.

a) Loadcell cable reel - Qty 02 nos.

b) Mudpit reel for SP reference electrode - Qty 01 nos.

c) Mudpit reel for Laterolog reference electrode - Qty 01 nos.

d) Grounding cable reel – Qty 01 nos. (required for CH operations)

**12.28.31** The following illumination accessories are to be quoted:

a) Replacement light bulbs (for all lights inside logging cabin) -- 10 nos. each type.

b) Complete light fixtures for rig light and work light same as fitted in the unit--03 nos. each type.

c) Replacement light bulbs for rig lights and work lights--20 nos. for each type of light.

**12.28.32** Spare PCB boards of supplied downhole tools procured under the spares & consumables section in the tender; must be compatible to the boards fitted in the tool. However, during a period of 10 years if any PCBs are found not compatible with the PCBs installed in the Tool / Tools then necessary up gradation of the Tool/Tools shall be done by the supplier at no cost to OIL.

**NOTE 21:** The Bidder is expected to quote every item as mentioned in the above clause 12.28.5 to 12.28.32. If the Bidder fails to quote any of the above items in the bid but found to be a part of the equipment during five years from the date of successful commissioning of the equipment, the bidder must supply the same FREE OF CHARGE TO OIL.

**NOTE 22:** Bidders must note that OIL at its discretion may increase or decrease the quantity of above spares and consumables.

**12.28.33 RECOMMENDED SPARE LIST:**

Apart from the spares, consumables and accessories mentioned in the clauses 12.28.1 to 12.28.31, the bidder is required to submit a list of all the recommended spares (electronic, electrical, mechanical, hydraulic etc.), accessories and consumables for the truck mounted assemblies, sub-assemblies, surface electronic systems, and downhole tools including explosives for side wall coring operations. This recommended spare parts list should contain Description, part Number and quantity of each item. The quantity of items recommended must be sufficient to cater 100 runs of per tool in 02 years of uninterrupted operation and maintenance.

**This is required for OIL's future reference / procurement only, and will not be considered for bid evaluation.**

**12.28.34 The Bidder must submit a written commitment that the spares and consumables will be supplied on chargeable basis to OIL for a period of 10 years from the date of closing of the bids, and in the event a part is not available due to a vendor going out of business or some other reason, the Bidder will determine and supply a suitable replacement part on chargeable basis to OIL.**

**12.28.35 Explosives for Side wall Core operations, Radioactive sources and perishable consumables like Paper, Films etc. are to be Air-freighted upto Kolkata / Delhi, India, and the bidders should quote accordingly.**

**12.28.36 Procurement of spares, accessories, PCBs, consumables etc. mentioned against clauses 12.28.1 to 12.28.31 shall be at the discretion of OIL.**

**12.28.37 STANDARD PRICE LIST**

Bidders are also required to submit a **standard price list** of the **entire items** used in the offered tools and surface systems. The price list must include all electronic, electrical, hydraulic items, mechanical items, accessories and consumables, Sub assemblies, surface electronic system of the truck unit and downhole tool. *The price list should contain description, part number and unit price of each item and must be valid for a minimum period of **two years** from the date of **successful commissioning of the equipment**. The prices of individual items should not exceed 10% of the price in the bid.*

**12.28.38** The bidder must quote as per the tender requirement only and provide FULL INFORMATION wherever applicable in the bid. Bidders' response to each clause of the NIT must be submitted in a tabular format as shown in APPENDIX - 2 with appropriate reference to the main quote. After opening of the bids, in case any technical clarification is required on any bid, OIL will seek clarification from the bidder and the bidder will have to reply/clarify with complete details within the specified time mentioned by OIL. If not complied, that particular bid will not be considered for evaluation.

## **12.29 BIDDERSEXPERIENCE & PAST PERFORMANCE**

**12.29.1** The bidders offering their bid for sale of their equipment against this tender are known to have proven experience in this field. However, they are required to confirm that they have manufactured and have supplied minimum 05 nos. of Open hole Wireline Logging Units (that are compatible to all these downhole logging tools as mentioned in this NIT) to various companies which are in business of “Exploration and Production of hydrocarbons” and / or Oil Field Service providers in last 05 years prior to closing of the bid. Following documentary evidence in respect of the above must be submitted along with the bid.

- i) Copies of the relevant Purchase Orders
- ii) Satisfactory supply completion / commissioning report from the customers

**12.29.2** Incase the above documentary evidences are not available with the bidder at the time of submission of the bid, the CEO or the Company Secretary of that bidding company must give an undertaking to the effect that his company has executed / fulfills all the requirements to the best satisfaction of their clients failing which their bid will be summarily rejected.

**12.29.3** The bidder must confirm in writing along with their bid that they possess all standard testing & calibration facilities at their manufacturing Base / Testing centre, including pressure / temperature testing etc., for all the tools offered by them against this tender.

**12.29.4** The logging truck, tools and accessories offered against this bid must be latest and state-of-the art in the Industry with capability of trouble free data recording and seamless data transferring up to well depth of at least 6000 mtrs. and must have been field proven for at least 1 year prior to bid closing date.

**12.29.5** The bidder should also have proper R & D facilities for development and upgradation of their equipment.

## **1.0 TRAINING& INSPECTION SERVICE BY BIDDER:**

**1.1** Immediately after placement of the Purchase Order, the successful bidder should communicate the proposed training schedule to OIL for the Field Engineers, Maintenance Engineers and Interpretation Engineers, at least 04 (four) months in advance for each training program. OIL in turn will confirm acceptance of the schedule of training at least two month in advance for each program. **The engineer's training program must be completed within 9 months of the issuance of LOI.**

**1.2**The bidder will have to provide training for 4 (FOUR) Field Engineers, 4 (FOUR) Maintenance Engineers, 2 (TWO) Log Data Processing & Interpretation Engineers at their training school which is equipped with Test Well and all other requisite facilities. The training charges, if any, should be quoted separately which shall be considered for evaluation of the bid. However, passage and living expenses, including accommodation charges of OIL Engineers nominated for the training courses will be borne by OIL.

### **1.3FIELD ENGINEERS' TRAINING:**

This should include detailed aspects of logging operations and basic equipment trouble shooting at Base and at Field. The training curriculum should include theoretical and practical training for Field Engineers' Training Course covering all the downhole tools including complete training on the software. Duration of the training period, location of training and prerequisite of the trainees, if any, etc. should be clearly specified in the bid document.

### **1.4MAINTENANCE ENGINEERS' TRAINING:**

This should include detailed theoretical and practical training on the surface logging system hardware & software, logging tools and on the preventive testing and maintenance aspects for Maintenance Engineers' Training course. The training course must give special emphasis on disassembly - assembly process of all the supplied tools covering complete maintenance training of logging tools at supplier's training school. Duration of the training period, location of training and prerequisite of the trainees, if any, etc. should be clearly specified in the bid document.

### **1.5LOG DATA PROCESSING, ANALYSIS AND INTERPRETATION TRAINING:**

The bidder is required to provide training on basic log interpretation and formation evaluation, data processing, analysis and interpretation of log data for all offered tool and software modules to be



procured from them at the Supplier's Training School. Duration of the training period, location of the training, and prerequisite of the trainees, if any, etc. should be clearly specified in the bid.

Bidder must give special emphasis on processing and interpretation of log data from the TT-RMT, Shear sonic Imaging tool etc., at the supplier's training school.

#### **1.6 TRANSPORT ENGINEERS' TRAINING:**

The successful bidder will have to arrange for a training program for 2 (two) Transport Engineers of OIL on Maintenance, Working Principles and Troubleshooting of the following systems / items used in the Logging Unit besides other relevant subjects, at the supplier's Training School. Duration of the training period, location of training and prerequisite of the trainees, if any, etc. should be clearly specified in the bid document.

- (a) Truck Engine and its control system
- (b) Transmission, PTO and Transfer Case (if any)
- (c) Pneumatic system (for the truck chassis)
- (d) Complete Hydraulic system (as per hydraulic schematics) for logging operation
- (e) All Pumps & Motors, and Torque Hubs of winch drum of the hydraulic system
- (f) Electrical/electronic control systems for operation of hydraulic winch and all other hydraulic actuators

#### **2.0 INSPECTION CUM ACCEPTANCE:**

**2.1** After finalizing the tentative readiness of the equipment, the successful bidder should communicate the proposed inspection schedule to OIL, with the confirmed date for inspection, at least three months in advance. OIL, in turn, will confirm the scheduled date of visit of its personnel one month in advance to the successful bidder.

**2.2** The pre-shipment inspection of the equipment shall be carried out in 2 (two) phases:-

**Phase-1** : for Automobile and Hydraulic Section and

**Phase-2** : for Logging Section, both at the supplier's premises by a team of executives from OIL as mentioned below. It is to be noted that immediately after completion of the Transport Engineers' Training, same team of two Transport Engineers from OIL will carry out the Phase – 1 inspection.

### **INSPECTION PHASE – 1: Automobile and Hydraulic Section:**

The supplier shall facilitate pre-dispatch inspection of the logging unit at their Plant/Works for a minimum period of 01 (one) week by 2 (two) Transport Engineers from OIL. Passage and living expenses, including accommodation charges of OIL Executives nominated to carry out the inspection work will be borne by OIL. The period of inspection and acceptance process may accordingly be specified by the bidders in the biddocuments.

The inspection cum acceptance process will include the following minimum tasks / steps:

- (a) Physical verification / inspection of all the items / fittings / accessories as per the Purchase Order (related to the Automobile Section only), including all parts catalogue, maintenance & Service Manuals, Schematics, Final Chassis built up/ Vehicle Content Record documents, etc. and actual loading on axles. The supplier shall arrange driver / operator, weighing facility and any other infrastructure as and when required during the process of inspection.
- (b) Verification of all Certificates / records of shock and vibration testing and other documents related to the logging truck.
- (c) Operational testing of the truck and the complete hydraulic system.
- (d) The supplier shall have to take note of any minor modification(s) for operational requirement suggested by the inspectors and comply with the same at no extra cost.
- (e) The minutes of the inspection task would be prepared at the end of the inspection process and jointly signed by both the parties (OIL and the supplier).
- (f) The supplier shall confirm in writing compliance of all the points raised in the minutes of inspection as well as any other subsequent additions / changes, following deliberations with the Phase – 1 Inspectors after arrival at Duliajan, Assam.

**NOTE: 23** The team of 02 (two) Transport Engineers from OIL, immediately after completing the Transport Engineers Training (clause 1.6 above), will carry out the Phase – 1 inspection for at least one week.

### **INSPECTION PHASE – 2 : Logging Section:**

The pre-shipment inspection of the equipment shall be carried out at the supplier's premises by a team of 02 (Two) executives from OIL as mentioned below.

The supplier shall facilitate pre-dispatch inspection of the logging unit at their Plant/Works for a minimum period of 05 (FIVE) weeks by 2 (TWO) Logging Engineers in senior level from OIL.

Passage and living expenses, including accommodation charges of OIL Executives nominated to carry out the inspection work will be borne by OIL. The period of inspection and acceptance process may accordingly be specified by the bidders in the bid documents.

The inspection cum acceptance process will include the following minimum tasks / steps:

- (a)** Physical verification of all the items as per the Purchase Order with emphasis on items of cost more than US \$ 1500 per item.
- (b)** Functional testing of the logging system, logging tools and accessories to their rated specifications.
- (c)** Verification of all records of Pressure, Temperature, Shock and Vibration testing carried out after manufacture of the logging tools as applicable.
- (d)** Checking of Export Quotes and discussing necessary modalities for safe transportation of the goods.
- (e)** Technical discussions on any deviations from the Purchase order and provide feed back to OIL with technical justifications for approval of the order amendment by the competent authority.
- (f)** Inspection of Training Manuals and other Engineering Documents.
- (g)** The Inspection and Acceptance report would be prepared jointly and signed by representatives of both the parties at the end of the inspection process.
- (h)** The supplier shall confirm in writing compliance of all the points raised in the minutes of inspection as well as any other subsequent additions / changes, following deliberations with the Inspectors after arrival at Duliajan, Assam.
- (i)** After completion of the Phase-2 inspection, the supplier will effect dispatch of the unit only on receipt of OIL's dispatch advice.

## **1.0 INSTALLATION AND COMMISSIONING**

**1.1** Installation and commissioning includes commissioning of the two logging units, actual performance testing of the all offered tool in OIL's wells. Bidder shall have to depute personnel with good communication capability in English, having minimum five years of experience in Wireline logging and maintenance of wireline logging units and tools. Bidder's personnel shall be responsible for commissioning of the entire equipment at Duliajan. OIL shall ONLY provide helpers during commissioning of the Wireline logging tools in OIL's wells. The bidders must quote for lump sum commissioning charges which should include to and fro air-fare of their personnel engaged during the commissioning period as indicated in appendix.

**The commissioning charges quoted will be considered for bid evaluation.**

Contractor shall have to bear all expenses related to Train/Air/Sea travel, local transportation expenses, transit insurance and boarding and lodging expenses etc., for their personnel deployed during commissioning.

Immediately after receipt of all the materials by OIL at Duliajan, a written advice will be issued to the supplier asking them to commence installation and commissioning, which must be promptly acknowledged by the supplier.

Commissioning of the LOGGING UNITS along with the entire tool and other accessories is to be completed within 04 (Four) month from the date of receipt of such an advice from OIL (this four months period excludes the waiting time for well readiness).

In the event of extension of commissioning period by more than 04 months due to non-availability of wells, the bidder may replace its commissioning engineers with engineers having commensurate experience of logging operation (Wire line Logging experience) and maintenance background only to the satisfaction of OIL.

Bidder's inability to provide requisite engineers during equipment failure or during any time of the commissioning period resulting in delay in commissioning of the logging unit shall make it liable to LD as per clause 2.0 below.

Supply of short-shipped and warranty replacement items is to be arranged, including Customs Clearance etc. by the suppliers or their authorized representatives at their cost within 03 (three) months from the date of completion of commissioning of the entire equipment. The bidder will be held responsible for any further delay in completion of commissioning of the goods at site and in case of defaulters; the Liquidated Damage Clause (Clause 2.0 below) shall be made applicable.

- 1.2** In order to complete the field commissioning of the offered tools and accessories within the stipulated time-frame, all the spares and accessories which will be required during commissioning (due to failure of some components and/or any other materials required) are to be arranged (including Customs Clearance etc.) by the suppliers or their authorized representatives at the earliest, at site at their cost.
- 1.3** For installation and commissioning jobs at Duliajan (Assam), the offered tools shall be tested in OIL's oil/gas wells by carrying out actual logging operations. Prior to this, the logging tools will be calibrated in the base and at site to OIL's satisfaction. Each downhole tool must perform at least 02 nos. of successful logging jobs in two different wells. Each of these logging jobs will have to be carried out in a well-depth of 3500 meters (approx.) or more and the logging interval (with repeat section) would be as required by OIL.
- 1.4** The Installation and Commissioning report will be prepared jointly and signed by the representatives of both the parties at the end of successful completion of Installation and Commissioning process.

**2.0 LIQUIDATED DAMAGE:**

Liquidated Damage **will be levied for any failure on the part of the supplier in completion of installation and commissioning @ 0.5% per full week or part thereof to a maximum of 10% of**

**the value of the installation and commissioning.** Moreover, if the successful bidder fails to commission the entire equipment within 01 (one) year from the date of intimation from OIL after arrival of the equipment at Duliajan, OIL will invoke performance security.

### **3.0 WARRANTY:**

3.1 Oil India Limited (OIL) reserves the right to inspect, test and wherever necessary, reject the goods after arrival of the goods at site, only if the said rejection is attributed to be the responsibility of the Bidder. It shall, in no way be limited or waived by reason of the goods being previously inspected, tested and passed by OIL or its representatives prior to the goods shipment from the country of origin.

3.2 Materials supplied as per the Purchase Order should be under warranty by the suppliers for a **minimum period of 01 (one) year** from the date of successful completion of installation and commissioning of the entire equipment at site. Any item / sub item failed during the above mentioned warranty period is to be replaced / repaired within 03 (three) months from the date of notification of such failure. The warranty of the repaired / replaced items shall be correspondingly extended by a period equal to that from the date of failure to the date of commissioning of the replaced/repaired item. In order to keep the equipment fully operational, all spares and accessories required during the warranty period is to be arranged at site by the suppliers or their authorized representatives, within 03 (three) months, at their cost (including Customs Clearance etc.)

### **4.0 DELIVERY**

- i. Delivery required against this tender is maximum 12 (Twelve) months from the date of opening of LC in case order is placed on the foreign supplier OR within 12 (Twelve) months from the date of receipt of order in case order is placed on indigenous supplier. Date of cleanBill of Lading (B/L in case of foreign supplier) or Consignment Note date (C/Note date in case of foreign supplier) shall be considered as delivery date.
- ii. Bidder must comply the above schedule and confirm in their Techno-Commercial bid. Bids not meeting time schedule as mentioned in the tender shall be summarily rejected.
- iii. In the event of the Seller's default in maintaining the quoted delivery schedule, seller shall be liable to **pay liquidated damages @ 0.5% per week** or part thereof of the material value of the order subject to a maximum of 7.5%. Liquidated damages amount, if any, shall be adjusted/deducted while processing the balance payment which is payable after commissioning.

**LOGGING TOOL SPECIFICATION SHEET**

	<b>Tender No.</b>		
	<b>Bidder's Name</b>		
	<b>DOWNHOLE TOOLS/CONVEYENCE SYSTEM</b>	<b>TOOL /CONVEYENCE SPECIFICATIONS</b>	<b>BIDDER'S TOOL RESPONSE (If applicable )</b>
1.	<b>12.6</b> HIGHRESOLUTION LATEROLOG TOOL OR EQUIVALENT	MEASUREMENT TYPE:	
		MEASUREMENTRANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETERRANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
2.	<b>12.7</b> MICRO SPHERICALLY FOCUSSED TOOL OR EQUIVALENT	MEASUREMENT TYPE:	
		MEASUREMENTRANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETERRANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
3.	<b>12.8</b> SPECTRAL LITHO DENSITY LOGGING TOOL OR EQUIVALENT	MEASUREMENT TYPE:	
		MEASUREMENTRANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETERRANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
4.	<b>12.9</b> COMPENSATED DUAL SPACED NEUTRON POROSITY TOOL OR EQUIVALENT	MEASUREMENT TYPE:	
		MEASUREMENTRANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETERRANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
5.	<b>12.10</b>	MEASUREMENT TYPE:	
		MEASUREMENTRANGE:	

	NATURAL GAMMARAY TOOL	TOOL DIAMETER:	
		BOREHOLEDIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
6.	<b>12.11</b> ARRAY TYPE INDUCTION RESISTIVITY TOOL	MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
7.	<b>12.12</b> SONIC TOOL WITH CBL/VDL CAPABILITY OR EQUIVALENT	MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
8.	<b>12.13</b> ACOUSTIC PIPE INSPECTION AND CEMENT EVALUATION TOOL OR EQUIVALENT	MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
9.	<b>12.14</b> HIGH PRECISION BOREHOLE DEVIATION SURVEY TOOL	MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
10.	<b>12.15</b> THROUGH TUBING RESERVOIR MONITORING TOOL WITH GR & CCL	MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	



		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 300° F minimum	
		PRESSURE: 15000 psi Minimum	
11.	<b>12.16</b> TELEMETRY CARTRIDGE TOOL	MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BORE HOLE DIAMETER RANGE:	
		ACCURACY:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
12.	<b>12.17</b> DOWNHOLE TENSION DEVICE TOOL	MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BORE HOLE DIAMETER RANGE:	
		ACCURACY:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
13.	<b>12.18</b> SIDE WALL CORING (PERCUSSION TYPE) TOOL WITH SHOOTING GR & CONSUMABLES	MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BORE HOLE DIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
		TEMPERATURE: 350 deg F Minimum	
14.	<b>12.19</b> STANDARD WIRELINE CABLE GUIDED FISHING ,OPEN ENDED FISHING EQUIPMENT & 160 BOWEN SERIES OR EQV	TOOL DIAMETER:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
15.	<b>12.20</b> ELECTRICALLY RELEASEABLE CABLE HEAD (For Multi-conductor)	MEASUREMENT TYPE:	
		TOOL DIAMETER:	
		BORE HOLE DIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		TEMPERATURE: 350 deg F Minimum	
16.	<b>12.21</b> SPECTRAL GAMMA RAY TOOL OR EQUIVALENT	PRESSURE: 18000 psi Minimum	
		MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	
		TOOL DIAMETER:	
		BORE HOLE DIAMETER RANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		VERTICAL RESOLUTION:	
17.	<b>12.22</b> SHEAR SONIC IMAGER TOOL WITH CROSS-DIPOLE	TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
		MEASUREMENT TYPE:	
		MEASUREMENT RANGE:	

		TOOL DIAMETER:	
		BOREHOLEDIAMETERRANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	
18.	<b>12.23</b> ELEMENTAL CONCENTRATION TOOL  (OPTIONAL TOOL)	MEASUREMENT TYPE:	
		MEASUREMENTRANGE:	
		TOOL DIAMETER:	
		BOREHOLEDIAMETERRANGE:	
		DEPTH OF INVESTIGATION:	
		ACCURACY:	
		TEMPERATURE: 350 deg F Minimum	
		PRESSURE: 18000 psi Minimum	

Tender No.				
Bidder's Name				
OIL NIT Clause No.	OIL NIT Clause Description	Bidder's Response	Any Deviation from NIT Clause (Yes / No)	Reason for Deviation
1.0	<b>HYDRAULICS SYSTEM</b>			
1.1	The hydraulic system provided should be powered by hydraulic pumps to drive the winch motors and the on board power generator.			
1.2	The Dual drum/ SplitDrum(hepta-cable drum and mono-cable drum) powered by the hydraulic system, shall have extremely fine speed control from <i>1 m/min or less to 150 m/min or more</i> ; even at maximum load condition			
1.3	Bidder's Winch hydraulic drive control, speed and pull must be done with an electronic proportional (EP) control joystick/lever mounted on the operator's control panel.			
1.4	Winch drum creeping should not be more than 0.5 m/min and 5 m/min respectively under low gear and high gear condition when joystick is kept at neutral position without applying brake at any depth and load condition on the hydraulic system.			
1.5	The system provided must have a <b>mooring control</b> for cable spool-off under line tension.			

1.6	Bidder must provide a back up electrically operated hydraulic brake along with backup mechanical hand brake for the winch.			
<b>2.0</b>	<b>OVERHEAD SPOOLING AND DEPTH MEASURING SYSTEM</b>			
2.1	The bidder's overhead Spooling system must be lightweight with a pneumatic cylinder for height adjustment and with a hydraulic side to side steering.			
2.2	Offered overhead spooling system must have accurate straight line measuring head for metric depth transmission having dual electronic encoders, a tension device and independent mechanical/electronic backup encoder for both Slammer & mono-conductor cables.			
	The display of the backup mechanical/electronic encoder to be made available near the winch operator panel.			
2.3	Line weight measuring system must have weight indicator to measure line tension up to 25,000 lbs (9842.5 kg). It should have digital display for total and differential load.			
	Weight measurements should have audio and screen alarms at operator's panel for increase/decrease of line load.			
2.4	The depth measuring panel must be capable to compute cable stretch via software for interactive depth correction.			
2.5	Bidder must also provide with a parallel-working Remote Display System for display of Depth and Line tension at Rig floor required for Fishing operation.			
<b>3.0</b>	<b>ELECTRICAL SYSTEM/EQUIPMENT</b>			
3.1	Adequate, Stable electrical power must be generated by the truck's Hydraulic alternator(preferably Marathon generator Magna Plus Model: 283PDL1766 having 30KW capacity) for power requirement of the surface system,			

	downhole tools, air-conditioners & all other electrical accessories in the logging unit.			
3.2	The captive power source must be equipped with voltage and frequency monitor & control, over/under voltage and frequency protection.			
3.3	The onboard power generator must have automatic safety shut-down features.			
3.4	The electrical system must have a <b>Power Distribution board</b> inside logging cabin, with circuit breakers, power plant controls, and frequency, voltage and current meters.			
3.5	The operator's cabin to have a Red, night vision light.			
3.6	A suitable power intake point is to be provided to feed power into the unit from external source as per clause.			
3.7	Electrical power Outlets for internal accessories are to be provided.			
3.8	Exterior power outlets should be properly covered.			
3.9	Color coded / Function coded truck electrical wiring and easily accessible for maintenance and service purposes must be provided.			
	Entire wiring should be well documented.			
3.10	Back up electrical power generator of minimum requirement capacity should be provided. The backup electrical power source should be either a Diesel generator or BACKUP hydraulic alternator as per clause.			
4.0	<b>LOGGING CABIN/OPERATOR'S COMPARTMENT</b>			
4.1	The cabin will be suitably air-conditioned with 4 nos. covered roof mounted electrical air-conditioners as per clause stipulation.			
	The air-Conditioners should withstand the shock of transportation on rough country roads and should be suitably guarded.			
4.2	The cabin should have a requisite capacity			

	dehumidifier and temperature indicator installed.			
4.3	The cabin must have enough space for operating engineers, a witness and the winch Operator.			
4.4	The logging cabin should have suitable LED lights for proper illumination as per clause.			
4.5	Bidder must provide sufficient power LED lighting at the draw works area, and rear exterior corners as per clause.			
	Extra battery operated rig lights (LED) must be installed below the LED lights at the rear exterior corners of the unit.			
	Both the provided lights at the rear exterior corners must have suitable metallic cover at sides to protect against impact.			
4.6	Emergency lights and Rig Stray Voltage & RF Monitor unit mounted inside the logging cabin for perforating safety.			
4.7	Must provide two numbers of Fire extinguishers and one no. of first-aid kit.			
4.8	Must provide Weather-proof two way 'Rig Floor to Unit Communication' device.			
4.9	Bidder must provide a Cabin pressurization system in to the logging cabin.			
4.10	Must provide Four numbers of swivel type chairs and winch operator Chair as per clause requirement.			
4.11	Logging engineer console should be co-located to the operator's winch panel.			
4.12	At least three numbers of drawers with locking / latching arrangement should be provided.			
4.13	The offered logging unit must have a Console Panel for controlling and monitoring various logging unit parameters as per clause.			
4.14	Slip proof metallic floor with suitable carpet.			
4.15	The logging unit's steel welded construction materials			

	should be painted to resist corrosion.			
4.16	The logging cabin must have a sliding window above winch area as per clause.			
4.17	Roll up tinted window shades is to be provided to minimize sunlight or external light.			
4.18	Apart from normal power outlets (110Vac, 50/60 Hz) provided inside the logging cabin minimum one numbers of power outlets (220Vac, 50/60 Hz) to be given in the logging cabin (preferably multi socket that accepts British plugs in addition to Euro, NEMA American and Australian plugs with ON/OFF switch)			
5.0	<b>SURFACE LOGGING SYSTEM</b>			
5.1	Bidder must provide the latest digital data acquisition system for carrying out all Open Hole, Cased Hole and perforating services with features as per stated clause.			
5.2	Bidder must provide two independent logging systems in a logging unit as per clause.			
5.3	The offered surface logging system must perform the logging operations and services with the type of tools as described in the Clauses 12.6 to 12.23 1(if optional tool quoted).			
5.4	Bidder MUST quote two independent Cased Hole Interface Panel (For each Logging unit) with latest software preferably "WARRIOR" and having requisite dongle (if applicable) and license for running different cased hole services as specified in clause.			
5.5	Bidder must quote suitable hardware and software necessary to log with existing GE-SondexUltralink tools available with OIL.			
5.6	Change over from one system to the other must be easy and user-friendly.			
6.0	<b>LOGGING SYSTEM HARDWARE (DUAL SYSTEM)</b>			

6.1	Each independent system must have all standard fittings/accessories as mentioned in clause 6.1.1 through 6.1.5			
6.2	Bidders each system CPU must be very high speed, state-of-art computer with sufficient RAM and hard-drive, supporting Dual display and offering multi-tasking operations as per clause.			
6.3	Each system should have at least 02 (two) Monitors working simultaneously and swappable from one system to other as per clause with extra monitors as spare.			
6.4	If a panel is common to both the logging systems, the other panel should be provided as an extra.			
6.5	Bidder's supplied Dual Logging System must be two independently working logging system with minimum number of common panels, if any, to ensure full redundancy.			
6.6	Must support full-data communication between the two computers of the Dual computer system.			
6.7	Each computer must be supplied with two independent mirrored hard drives.			
7.0	<b>LOGGING SYSTEM SOFTWARE</b>			
7.1	The system should work on the latest operating software as per clause stipulation.			
7.2	Oil India Limited's logo must be incorporated in all outputs.			
7.3	Test and Diagnostic software for the surface system and downhole tools must be provided.			
7.4	The system must be capable of converting log data into standard formats mentioned in clause.			
7.5	The system must include environmental correction packages for the downhole tools.			
7.6	The system software must include automatic depth correction capability.			



7.7	Record real-time and playback on thermal paper/film in different depth scales as per clause.			
7.8	The system software must display real-time corrected depth and line tension.			
7.9	Details of the software with price break up should be provided.			
7.10	Backup copies of all loaded software shall be supplied as per clause.			
7.11	The bidder should give an undertaking to support licensing for the software for minimum period of 10 years.			
7.12	Bidder should offer undertaking for free periodic updation / upgradation for a minimum period of 10 (ten) years.			
8.0	<b>ADDITIONAL LOGGING UNIT FEATURES</b>			
8.1	Bidder must provide Nonmagnetic Dual Drum cable reels 0.474 inch OD Slammer cable and single conductor 5/16" OD cable in one unit and 7/32" cable in another along with other features as per clause.			
8.2	The logging unit large winch drum must be capable to provide over-pulls up to 15000lbs during stuck conditions, the hydraulic system rating of the large drum winch must be sufficient to withstand these over-pulls safely (well within system rating of the logging units).			
8.3	The logging units must be fitted with fittings to supply compressed air for grease injection control head as per clause.			
8.4	Bidder must provide a certificate confirming micro fractures / cracks free base mounting frame of the cable drums.			
8.5	Bidder must provide built-in line oiler system for lubricating the cables as per OIL's specifications.			
8.6	Grounding reel fitted with at least 50 meters cable with clamps must be provided.			

8.7	Reels necessary for mud pit, intercom, top load cell etc., of at least 100 m length to be provided.			
8.8	Bidder must provide requisite Tool racks with air bags for transportation of tools as per clause stipulation.			
8.9	Bidder must have storage area for tools below the drum floor as per clause.			
8.10	The units must have slips rings well protected and should be accessible for repair work.			
8.11	Both units must be supplied with vise and folding step as per NIT.			
8.12	Bidder must quote air operated Line wipers for cleaning cables.			
8.13	Bidder must confirm that all electrical wires in the winch compartment are concealed.			
8.14	Logging units must be painted as per specifications provided by OIL.			
8.15	The unit must have required safety sign displayed			
<b>9.0</b>	<b>STORAGE REQUIREMENT WITHIN LOGGING UNIT</b>			
9.1	Bidder must provide suitable transport containers for Density and Neutron sources in the units as per the clause stipulation.			
9.2	Bidder must provide two separate chambers for carrying primary and secondary explosives as per clause in NIT.			
9.3	The units should have compartments for rig up accessories and hand tools.			
9.4	Bidder must provide all compartments with locking facility.			
9.5	Bidder to install arear bumper with storage compartments and a mounted vise as specified. The rear section of the truck to have foldable steps as mentioned in the clause.			
9.6	Bidder must confirm to include an aluminum tread plate material flooring with a weather resistant rear area cover.			

10.0	<b>LOGGING RIG-UP &amp; OTHER ACCESSORIES:</b>			
10.1 to 10.43	Bidder must quote all operationally required rig-up equipments, accessories and consumables for straight away commissioning of the units mentioned as per the clause.			
	Bidder must confirm to quote all items required for standard safe operation. If any item is required during commissioning but not quoted by bidder, the said item must be supplied at no extra cost to OIL.			
	Bidder must note that OIL at its discretion may increase or decrease any item(s) quantity under clause 10.0			
11.0	<b>TECHNICAL MANUALS AND DOCUMENTATION:</b>			
11.1	Bidder must submit required documentation with bid as per the stipulated clause.			
11.2	Bidder must submit required documentation with the supply of the Logging unit as per the stipulated clause.			
12.0	<b>DOWNHOLE LOGGING TOOLS</b>			
12.1	Bidder's supplied logging tools (except HRLA, MSFL, SDL, DSN, ACRT and RMT tool) mentioned in this clause should be rated for minimum 124 MPA (18,000 PSI) pressure and minimum 174 Degree C (345 Deg F) temperature as per prescribed clause requirement			
12.2	Bidders must supply proper accessories to log holes of deviation up to 45 degrees.			
12.3	Bidders confirm to quote all required accessories against each offered tools as per clause.			
12.4	The bidder must submit the technical specifications against each downhole tool in a tabular format (Annexure – 1) as per clause.			
12.6 to 12.22	Bidders must quote all the tools and accessories mentioned in clause from 12.6 to 12.22 as per the intended specifications provided against each clause.			

12.23	Bidder may quote Elemental Concentration Spectroscopy tool subject to fulfilment of Rate Reasonability clause.			
12.24	The bidder must confirm that their offered tools must be able to be run independently and in various combinations (as per table in the clause).			
12.25	Bidder must confirm that their offered surface logging system should be capable of up gradation to run MRIL or Slim Quad Combo tools as per clause.			
<b>COMPUTER SYSTEM FOR LOG DATA PROCESSING &amp; INTERPRETATION AT BASE</b>				
12.26.1 to 12.26.2	The bidder must quote latest version data processing and interpretation software with license keys for processing advanced logs with required capability as per the stipulated clause.			
12.26.3 to 12.6.5	Bidder must provide single user computer system with all accessories for processing and interpreting log data as per clause			
12.26.6	Bidder must provide consumables for 100 data processing jobs as per clause.			
12.26.7	Software supplied by bidder for data processing & interpretation should be capable of accepting competitors tool data required for interpretation			
	Bidder must provide complete processing and interpretation hardware and software along with individual price breakup. OIL may at its discretion select requisite software and hardware modules.			
	Bidder agrees to supply any data processing and interpretation software which has not been quoted in the bid and found required during commissioning or at a later date, has to be supplied on FOC basis.			
<b>LAB SYSTEM FOR FAULT DIAGNOSTICS AND SUITABLE CONVECTION OVEN FOR TEMPERATURE TESTING OF TOOLS</b>				
12.27.1& 12.27.9	Bidder must provide a rack mounted independent system and quote item wise Lab system components for fault			

	analysis and Repair of offered logging tools as per clause.			
12.27.2	Bidders must quote necessary hardware and software with licenses for the lab system.			
12.27.3	Lab system must be capable to power-up and acquire data required for diagnosing at LAB.			
12.27.4	Lab system must be capable to open and close callipers for offered padded tools.			
12.27.5	Lab system must record and play back logging tool data and print output.			
12.27.6	Must be rack mounted for easy installation.			
12.27.7	Bidder should quote all hand tools and other equipment required for troubleshooting and assembly-disassembly of logging tools as per clause.			
12.27.8 & 12.27.10	Bidder must also quote as a separate item a <u>NON-MAGNETIC</u> Forced-Air Oven for qualification testing of down-hole electronic logging equipment supplied by bidder up to 350 deg F as per clause.			
12.12.28	<b>EXPLOSIVES SPARE PARTS AND CONSUMABLES</b>			
12.28.1 (a through g)	Bidder must quote all explosives, spares and consumables as per mentioned quantities for items in clause of the tender.			
	Bidder must note that all Items in clause 12.28.1 through 12.28.9 shall be considered for bid evaluation.			
12.28.2	Bidder must quote spares and accessories for periodic maintenance for standby AC power generator as per clause.			
12.8.3	Bidder must quote spares and accessories for Roof mounted air-conditioners as per clause.			
12.28.4 to 12.28.31	Bidder should quote all PCBs, detectors, transmitter-receiver set etc., used in the offered tools and equipment as per requisite clause in NIT.			

12.28.32	Spare PCB boards of supplied downhole tools procured under the spares & consumables section in the tender; must be compatible to the boards fitted in the tool.			
12.28.33	Bidder must submit a list of all recommended spares, accessories and consumables of logging unit and tools as per stipulated clause, sufficient to cater for 100 runs per tool in 02 years of operation and maintenance as per clause.			
12.28.34	Bidder must submit written commitment to OIL regarding supply of spares and consumables on chargeable basis for a minimum period of 10 years, and in the event a part is not available due to a vendor going out of business or some other reason, the Bidder will determine and supply a suitable replacement part on chargeable basis to OIL.			
12.28.35	Bidder must air-freight coring gun explosives, RA sources and perishable consumables to India as per clause.			
12.28.36	Bidder must note that procurement of spares, accessories, PCBs, consumables etc. mentioned against clauses 12.28.1 to 12.28.31 shall be at the discretion of OIL.			
12.28.37	Bidder must provide a standard price list of the entire supplied equipment valid for 2 years as per NIT clause.			
12.28.38	Bidder must quote as per tender requirement only as mentioned in clause.			

**BRC EVALUATION MATRIX**

**APPENDIX-3**

<b><u>Tender No.</u></b>			
<b><u>Bidder's Name</u></b>			
<b>Sl. no.</b>	<b>BEC /BRC Clause Description</b>	<b>Bidder's Response (complied/ not-complied)</b>	<b>Relevant Page no. of the Bid to support Bidder's response</b>
<b><u>BID REJECTION CRITERIA (BRC)</u></b>			
	Bidder's offer must conform to the technical specifications and terms and conditions indicated in the tender and the bidder should offer full quantities of goods and services mentioned as per the clause requirement.		
<b>(A)</b>	<b><u>TECHNICAL :</u></b>		
1.0	<p><b><u>Eligibility &amp; Experience of the Bidder:</u></b></p> <p><b>1.1 Experience as a Manufacturer</b></p> <p>The Bidder should be Manufacturer of Open-Hole Wireline Logging Units. The bidder should satisfy the following clauses and documentary evidence should be enclosed along with the techno-commercial bid:</p> <p><u>If the bidder is OEM of Open hole Logging Units &amp; Tools:</u></p> <p>[a] The Bidder should have minimum 05 (Five) years of Experience in manufacturing of Open-Hole wireline Logging unit.</p> <p>[b] The Bidder should have manufactured and sold minimum 05 (Five) numbers of Open-Hole Wire line Logging Units to various companies which are in the business of 'exploration &amp; production of hydrocarbons' and/or 'Oil Field Service Providers' during the last 05 (Five) years.</p> <p>[c] The Purchase Orders mentioned above must have been effected to purchasers/ clients based in at least 02 (Two) different countries.</p> <p>For clauses (a), (b), &amp; (c) above, the reckoned period shall</p>		

	<p>be the period prior to the date of original closing of the techno-commercial bid of this tender.</p> <p>[d] Documentary evidence in respect of the above should be submitted with the bid in the form of copies of relevant Purchase Orders along with the following documents:-</p> <p>(i) Dispatch documents (Invoice, Bill of Loading/Consignment, etc.), and</p> <p>(ii) Successful Commissioning Report.</p> <p>[e] In addition to the above, the bidder shall also furnish certificates/documents (which are to be submitted along with the bid) from at least 02 (Two) of their Customers certifying the satisfactory functioning of the Logging Units and Tools sold to them by the bidder. In case such documents are genuinely of confidential in nature or cannot be shared, then either the CEO or the Company Secretary of that bidding company must give an undertaking to the effect that his company has executed /completed such Orders and the Logging Units/Logging Tools sold by his company are performing to the best of satisfaction of the customers/ clients.</p> <p>[f] Bids should be from Manufacturer of Open Hole Wireline Logging Units. In case the bidder is not a manufacturer of Open Hole Logging Units, its bid can also be considered provided the Open Hole Wireline Logging Units offered is from Parent / Subsidiary / Co-subsiary of any tier of same Group Company (any such relationship should be on 100% basis) who is a manufacturer of Open Hole Logging Units, provided (i) the bidder submits documentary evidence regarding existence of such a relationship between the Bidder and the Manufacturer,</p>		
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	<p>(ii) the Manufacturer authorizes the Bidder to sell their products and services (viz. Installation &amp; Commissioning services, Training services, etc.) mentioned in this tender document and submits a back-up authority letter from the concerned Manufacturer in its techno-commercial bid. However, in such case, the manufacturer (the Parent / Subsidiary / Co-subsidiary company of the bidder) of the offered Open Hole Logging Unit on its own should meet the technical experience clauses as stipulated in the Para 1.1 (a), (b) &amp; (c) above.</p>		
	<p><b>1.2 Experience as service provider:</b></p> <p>(a) The bidder must have minimum of 2 (two) years of experience in providing Wire-line Logging Services to companies which are in the business of “Exploration &amp; Production of Hydrocarbon” in India.</p> <p>(b)The bidder should have provided Wire-line Logging services to at least 02 (two) different countries other than its country of origin during the last 5 (five) years.</p> <p>(c) The bidder must have its base in India with capability to provide immediate support / solutions to the Logging Units / Tools if required by OIL.</p> <p>* The above Wireline Logging services provided by the Bidder may be as Parent /Subsidiary / Co-subsidiary of any tier of same Group Company (any such relationship should be on 100% basis).</p> <p>* Experience of the bidder, as above, the reckoned period shall be the period prior to the date of original closing of the techno-commercial bid of this tender.</p>		

	<p>(d) Documentary evidence in respect of the above should be submitted with the bid in the form of copies of relevant Contract Orders along with the following documents:-</p> <p>(i) satisfactory completion / performance report, OR</p> <p>(ii) proof of release of Performance Security after completion of the contract, OR</p> <p>(iii) proof of settlement / release of final payment against the contract. OR</p> <p>(iv) documentary evidence in the form of initial and final signed Job Tickets , Service Tickets.</p>		
2.0	Wherever two or more sets of the same equipment/item are required, the bidders must quote all the sets of the same item that are identical in all respects i.e. the same category of equipment must be of same make, model and compatible in all respects. The bidder must quote accordingly as mentioned in this clause.		
3.0	Bids with qualifying conditions like “the product is under development and would be supplied by the time ..... etc.,” will be summarily rejected.		
4.0	Offers of Left-Hand driven (Steering on Left Hand Side inside the driver’s cabin) Logging Truck will be rejected		
5.0	Offers other than diesel fuel driven Logging Trucks will be rejected.		
6.0	Surface Logging System: The offered surface logging system must be capable of performing the logging operations and services with the type of tools as described in the Clause 12.6 to 12.24 of ANNEXTURE-B12 in this document. Bidder must confirm compliance on this point in its bid.		

7.0	System Up gradation Capabilities: The system must have the capacity to be upgraded as mentioned in clause 12.27 of ANNEXTURE-B14. System capability for taking up specialized logging surveys through up gradation is mandatory for acceptance of the offer. Bidder must confirm compliance on this point in its bid.		
8.0	Training and Inspection: Offer for Training and Inspection should be as per the clauses mentioned in the ANNEXTURE-C of this Tender document.		
9.0	<p>Delivery: i) Delivery will be essence of the contract. Delivery required against this tender is maximum 12 (twelve) months from the date of opening of LC in case order is placed on the foreign supplier OR within 12 (twelve) months from the date of receipt of order in case order is placed on indigenous supplier. Date of clean Bill of Lading (B/L in case of foreign supplier) or Consignment Note date (C/Note date in case of foreign supplier) shall be considered as delivery date.</p> <p>ii) Bidder must comply the above schedule and confirm in their Techno Commercial bid. Bids not meeting time schedule as mentioned in the tender shall be summarily rejected.</p> <p>iii) In the event of the Seller's default in maintaining the quoted delivery schedule, seller shall be liable to pay liquidated damages @ 0.5% per week or part thereof of the material value of the order subject to a maximum of 7.5%. Liquidated damages amount, if any, shall be adjusted/deducted while processing the balance payment which is payable after commissioning.</p>		
10.0	WARRANTY: The bidders should offer a Warranty Period of at least 1 (one) year for the entire equipment supplied		

	starting from the date of completion of successful field commissioning of the entire equipment. Any item / sub-item failed during the warranty period are to be replaced / repaired within 3 (three) months and the warranty for such items should be extended as mentioned in clause 3.0 of ANNEXTURE-D of this document. Bidder must confirm compliance on this point in its bid.		
11.0	Commitment For Spares Supply: Bidders must submit a written commitment to supply spares and consumables on chargeable basis to OIL for a period of 10 ( Ten ) years from the date of closing of bids and in the event a part is not available due to a vendor going out of business or some other reason, the bidder will determine and supply a suitable replacement part on chargeable basis to OIL. Bidder must confirm compliance on this point in its bid.		
12.0	Installation and Commissioning: Bidders must confirm in their offer that they would carry out installation and commissioning of the logging units and tools and other supplied systems at Duliajan, Assam (India) as per clause 1.0 of ANNEXURE-D of the enquiry. Any bidder not offering to the installation and commissioning of all the systems shall be treated as non-responsive and rejected. The bidder must confirm compliance on this point in its bid.		
13.0	Deviations from Technical Specifications: The bidder must quote as per the tender requirement only and provide FULL INFORMATION wherever applicable in the bid. After opening of the bids, in case any technical clarification is required on any bid, OIL will seek clarification from that bidder and the bidder will have to reply/clarify with complete details within the specified time mentioned by OIL. If not complied, that particular bid will not be considered for further evaluation. The		

	bidder must respond to each and every clause in the NIT in a tabular form as per APPENDIX – 2.		
	<b><u>FINANCIAL CRITERIA :</u></b>		
1.0	ANNUAL TURNOVER: THE BIDDER SHALL HAVE AN ANNUAL FINANCIAL TURNOVER OF MINIMUM <b>US\$ 1,23,18,439.00</b> OR <b>RS. 89.05 CRORES</b> DURING ANY OF THE PRECEDING 03 (THREE) FINANCIAL YEARS RECKONED FROM THE ORIGINAL BID CLOSING DATE OF THE TENDER.		
1.1	"Net Worth" of the bidder should be positive for the preceding financial/accounting year.		
2.0	Considering the time required for preparation of Financial Statements, if the last date of preceding financial / accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial / accounting year are not available with the bidder, then the financial turnover of the previous three financial / accounting years excluding the preceding financial / accounting year will be considered. In such cases, the Net worth of the previous financial / accounting year excluding the preceding financial / accounting year will be considered. However, the bidder has to submit an affidavit/undertaking certifying that 'the balance sheet/Financial Statements for the financial year 2018-2019 has actually not been audited so far'.		
[a]	For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the bid:- i) A certificate issued by a practicing Chartered/Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in ANNEXURE. OR ii) Audited Balance Sheet along with Profit & Loss		

	account. In case of Foreign bidders, self-attested/digitally signed printed published accounts are also acceptable		
[b]	In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidder to provide documentary evidence for the same.		
3.0	In case the Audited Balance Sheet and Profit & Loss Account submitted along with the bid are in currencies other than INR or US\$, the bidder shall have to convert the figures in equivalent INR or US\$ considering the prevailing conversion rate on the date of Balance Sheet and Profit & Loss Account. A CA certificate is to be submitted by the bidder regarding converted figures in equivalent INR or US\$.		
	<b><u>COMMERCIAL :</u></b>		
1.0	Bids are invited under <b>Single Stage Two Bid System</b> . Bidders shall quote accordingly under Single Stage Two Bid System. <b>Please note that no price details should be furnished in the Techno-Commercial Unpriced Bid.</b> The “Unpriced Bid” shall contain all techno-commercial details except the prices which shall be kept blank. The “Priced Bid” must contain the price schedule and the bidder’s commercial terms and conditions. Any offer not complying with above submission procedure will be summarily rejected.		
2.0	Bid security of <b>US\$ 1,54,320.00 or Rs. 1,11,55,700.00</b> shall be furnished as a part of the <b><u>Techno-Commercial Unpriced Bid. Any bid not accompanied by a proper bid security in ORIGINAL will be rejected without any further consideration.</u></b> The Bid Security shall be valid for one year from the date of bid opening.  For exemption for submission of Bid Security, please refer Clause No. 9.8 (Section A) of “General Terms & Conditions” for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders).		

3.0	Validity of the bid shall be minimum 120 days from the original bid closing date. Bids with lesser validity will be straightway rejected.		
4.0	Successful bidder will be required to furnish a Performance Bank Guarantee @ 10% of the order value. The Performance Bank Guarantee must be valid for one year from the date of successful commissioning of the equipment. Bidder must confirm the same in their Techno-Commercial Unpriced Bid. Offers not complying with this clause will be rejected.		
5.0	Bidders must confirm that Goods, materials or plants(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a minimum period of twelve months from the date of successful completion of field commissioning of the Units at site at Duliajan, Assam (India) against any defects arising from faulty materials, workmanship or design. Defective goods/materials or any item / sub-item failed during the warranty period notified by OIL is to be replaced / repaired within 3 (three) months on FOR Duliajan basis at no extra cost to OIL and warranty for such items should be extended as mentioned in the <b>clause 3.0 of ANNEXTURE-D</b> of this document. This guarantee shall survive and hold good notwithstanding inspection, payment for and acceptance of the goods.		
6.0	The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.		
7.0	Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.		
9.0	Bidders shall quote directly and not through Agents in India. Offers made by Indian Agents on behalf of their foreign principals will be rejected. Similarly offers from unsolicited bidders will be rejected.		
10.0	Bids containing incorrect statement will be rejected.		

**Bidder's Past Supply record as per clause requirement :-****Appendix-4**

<b>SL No.</b>	<b>Client / Customer Name and Address with contact, e-mail id</b>	<b>Order No / Contract No.</b>	<b>Date of order</b>	<b>Open Hole Logging Unit specification (Make, Model ) &amp; Quantity supplied</b>	<b>Completion date</b>	<b>Reference of Supporting document enclosed</b>



## Appendix-5

S/N	Section Clause	Items quoted under Segment 1	Quantity Required	Bidder's Total price
1.	Clause1.0, 2.0 & 3.0 (Annexure-A)	TRUCK CHASSIS & DRIVER'S CABIN + COST OF FABRICATION OF THE LOGGING CABIN OF UNIT-1	01EA	UNIT1 <u>QUOTE1</u>
2.	Clause 1.0 to 9.0 (Annexure-B)	Logging Unit-1(DRAW WORKS, HYDRAULICS, WINCH,DUAL SYSTEM COMPUTERIZED ETC.)	01EA	UNIT1 <u>QUOTE2</u>
3.	Clause 5.0 (Annexure-A)	Automobile Unit Spares	01 SET	UNIT 1 <u>QUOTE2</u>
4.	Clause10.0 (Annexure-B)	Rig-Up accessories for Unit-1&Unit-2	Qty as per sub-clause10.1 to 10.43	UNIT 1 <u>QUOTE2</u>
5.	Clause 12.6 (Annexure-B12)	High Resolution Laterolog Tool any calibration equipment ,accessory required as part of tool	02EA	UNIT 1 <u>QUOTE2</u>
6.	Clause 12.7 (Annexure-B12)	Micro Spherically focused tools any calibration equipment , accessory required as part of tool	02EA	UNIT 1 <u>QUOTE2</u>
7.	Clause 12.8 (Annexure-B12)	Spectral Litho Density Logging Tool any calibration equipment , RA sources, accessory required as part of tool	01 EA	UNIT 1 <u>QUOTE2</u>
8.	Clause 12.9 (Annexure-B12)	Compensated Dual Spaced Neutron Porosity any calibration equipment , RA sources, accessory required as part of tool	01 EA	UNIT 1 <u>QUOTE2</u>
9.	Clause 12.10 (Annexure-B12)	Natural Gamma Ray Tool any calibration equipment , accessory required as part of tool	02 EA	UNIT 1 <u>QUOTE2</u>

10.	Clause 12.11 (Annexure-B12)	Array Type Induction Resistivity Tool any calibration equipment accessory required as part of tool	02 EA	UNIT 1 <u>QUOTE2</u>
11.	Clause 12.12 (Annexure-B12)	Sonic Tool with CBL/VDL capability any calibration equipment, accessory required as part of tool	01 EA	UNIT 1 <u>QUOTE2</u>
12.	Clause 12.13 (Annexure-B12)	Acoustic Pipe Inspection and Cement Evaluation Tool any calibration equipment , accessory required as part of tool	01 EA	UNIT 1 <u>QUOTE2</u>
13.	Clause 12.14 (Annexure-B12)	High Precision Borehole Deviation Survey Tool any calibration equipment, accessory required as part of tool	01 EA	UNIT 1 <u>QUOTE2</u>
14	Clause 12.15 (Annexure-B12)	Through Tubing Reservoir Monitoring Tool with GR& CCL any calibration equipment , accessory required as part of tool	01 EA	UNIT 1 <u>QUOTE2</u>
15	Clause 12.16 (Annexure-B12)	Telemetry Cartridge Tool any calibration equipment, accessory required as part of tool	02 EA	UNIT 1 <u>QUOTE2</u>
16.	Clause 12.17 (Annexure-B12)	Downhole Tension Device Tool any calibration equipment, accessory required as part of tool	04 EA	UNIT 1 <u>QUOTE2</u>
17.	Clause 12.18 (Annexure-B12)	Side Wall Coring Tool with Shooting GR Tool (Explosives, Accessories and Consumables supplied must be quoted with clause 12.30)	02 EA	UNIT 1 <u>QUOTE2</u>
18.	Clause 12.19 (Annexure-B12)	Standard Wireline cable guided, Open Ended Fishing Equipment & Overshot Fishing tool	01 EA	UNIT 1 <u>QUOTE2</u>
19.	Clause 12.20 (Annexure-B12)	Electrically Releasable Cable Head	01 EA	UNIT 1 <u>QUOTE2</u>
20.	Clause 12.21 (Annexure-B12)	Spectral Gamma Ray any calibration equipment, accessory required as part of tool	01 EA	UNIT 1 <u>QUOTE2</u>
21.	Clause 12.22 (Annexure-B12)	Shear Sonic Imager tool with Cross-dipole with calibration equipment and required accessory, if Any.	01 EA	UNIT 1 <u>QUOTE2</u>

22.	Clause 12.23 (Annexure-B12)	Elemental Concentration Spectroscopy Tool (OPTIONAL TOOL)	01EA	OPTIONAL ITEM RATE TO BE PROVIDED SEPERATELY
23.	--	Vendor to quote any other items deemed required under QUOTE-1		UNIT 1 <u>QUOTE2</u>
UNIT1 QUOTE-1 (ITEM Sl.No.-1) separate Quote to be provided				T1
UNIT 1 QUOTE-2 (ITEM Sl.No.-2 to 22 & 24) separate Quote to be provided				T2
TOTAL OF UNIT1 QUOTE-1 + UNIT1 QUOTE-2				T1+T2

#### Appendix-6

S/N	Clause Section	Items quoted under Segment 2	Quantity Required	Bidder's Total Price
1.	Clause1.0, 2.0 & 3.0 (Annexure-A)	TRUCK CHASSIS & DRIVER'S CABIN+ COST OF FABRICATION OF THE LOGGING CABIN	01EA	UNIT-2 QUOTE-3
2.	Clause 1.0 to 9.0 (Annexure-B)	LoggingUnit-2(DRAW WORKS, HYDRAULICS, WINCH, DUAL SYSTEM COMPUTER ETC.)	01EA	UNIT-2 QUOTE-4
3.	Clause 12.6 (Annexure-B12)	High Resolution Laterolog Tool any calibration equipment, accessory required as part of tool	01EA	UNIT-2 QUOTE-4

4.	Clause 12.7 (Annexure-B12)	Micro Spherically focused tools any calibration equipment, accessory required as part of tool	01EA	UNIT-2 QUOTE-4
5.	Clause 12.8 (Annexure-B12)	Spectral Litho Density Logging Tool any calibration equipment, RA sources, accessory required as part of tool	02 EA	UNIT-2 QUOTE-4
6.	Clause 12.9 (Annexure-B12)	Compensated Dual Spaced Neutron Porosity any calibration equipment, RA sources, accessory required as part of tool	02EA	UNIT-2 QUOTE-4
7.	Clause 12.10 (Annexure-B12)	Natural Gamma Ray Tool any calibration equipment , accessory required as part of tool	02 EA	UNIT-2 QUOTE-4
8.	Clause 12.11 (Annexure-B12)	Array Type Induction Resistivity Tool any calibration equipment accessory required as part of tool	01 EA	UNIT-2 QUOTE-4
9.	Clause 12.12 (Annexure-B12)	Sonic Tool with CBL/VDL capability any calibration equipment , accessory required as part of tool	02 EA	UNIT-2 QUOTE-4
10	Clause 12.13 (Annexure-B12)	Acoustic Pipe Inspection and Cement Evaluation Tool any calibration equipment , accessory required as part of tool	01 EA	UNIT-2 QUOTE-4
11.	Clause 12.14 (Annexure-B12)	High Precision Borehole Deviation Survey Tool any calibration equipment , accessory required as part of tool	01 EA	UNIT-2 QUOTE-4
12	Clause 12.16 (Annexure-B12)	Telemetry Cartridge Tool any calibration equipment, accessory required as part of tool	02 EA	UNIT-2 QUOTE-4
13	Clause 12.18 (Annexure-B12)	Side Wall Coring Tool with Shooting GR Tool (Explosives, Accessories and Consumables supplied must be quoted with clause 12.30)	02 EA	UNIT-2 QUOTE-4
14.	Clause 12.19 (Annexure-B12)	Standard Wireline cable guided, Open Ended Fishing Equipment & Overshot Fishing tool	01 EA	UNIT-2 QUOTE-4

15.	Clause 12.20 (Annexure-B12)	Electrically Releasable Cable Head	01 EA	UNIT-2 QUOTE-4
16.	Clause 12.22 (Annexure-B12)	Shear Sonic Imager tool with Cross-dipole with calibration equipment and required accessory, if Any.	01 EA	UNIT-2 QUOTE-4
18.	Clause 12.26 (Annexure-B15)	Computer System for Log data processing and interpretation at base	01 EA	UNIT-2 QUOTE-4
19.	Clause 12.27 (Annexure-B16)	Lab system for Fault analysis and repair and suitable convection oven for temperature testing of tools	01 EA	UNIT-2 QUOTE-4
20.	Clause 12.28 (Annexure-B17)	Explosives, Spares and Consumables	As per clause.	UNIT-2 QUOTE-4
21.	Clause 1.0 (Annexure-C)	Training charges	01 EA	UNIT-2 QUOTE-4
22.	Clause 2.0 (Annexure-C)	Pre-Dispatch Inspection Charges	01 EA	UNIT-2 QUOTE-4
23.	Clause 1.0 (Annexure-D)	Installation and Commission charges for Logging unit and tools	01 EA	UNIT-2 QUOTE-4
UNIT2 QUOTE-3 (ITEM Sl.No.-1), separate Quote to be provided				T1
UNIT2 QUOTE-4 (ITEM Sl.No.-2 to 28), separate Quote to be provided				T2
TOTAL OF UNIT2 QUOTE-3 + UNIT2 QUOTE-4				T1+T2