# OIL INDIA LIMITED

**(A GOVT. OF INDIA ENTERPRISE)**
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**AMENDMENT NO. 3 DATED 03.08.2019 TO TENDER NO. CDG1120P20 FOR CHARTER HIRING OF ONE NO. 3000HP RIG PACKAGE FOR DRILLING ONE EXPLORATORY WELL IN BLOCK: AA-ONN-2010/3 (Sadiya).**

This Amendment to Tender No. **CDG1120P20** is issued to notify about changes/modification/deletion of tender clauses as stipulated in APPENDIX-I enclosed herewith.

All other Terms and Conditions of the Tender/Bid Document (Considering all previous Amendments/Addendums, if any) will remain unchanged.

Sd/-
(B. Brahma)
Manager – Contracts
For Chief General Manager – Contracts

**APPENDIX-I**

# AMENDMENTS TO TENDER NO. CDG1120P20 FOR CHARTER HIRE OF 3000HP RIG PACKAGE

| Sr. No. | Section No. / Clause No. / Page No. | Original Clause | Amended Clause |
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| **Part-3, SECTION-I (GENERAL CONDITIONS OF CONTRACT)** | | | |
| 1 | Clause 12.3 Page 47 | Should 'force majeure' condition as stated above occurs and should the same be notified within **seventy-two (72) hours** after its occurrence the 'force majeure rate' shall apply for the first ten days. Either party will have the right to terminate the contract if such `force majeure' condition continues beyond fifteen (15) days with prior written notice. Should either party decide not to terminate the contract even under such condition, no payment would apply after expiry of fifteen (15) days period unless otherwise agreed to. Time for performance of the relative obligation suspended by the 'Force Majeure' shall then stand extended by the period for which such cause lasts. | Should 'force majeure' condition as stated above occurs and should the same be notified within **seventy-two (72) hours** after its occurrence the 'force majeure rate' shall apply for the first **fifteen** days. Either party will have the right to terminate the contract if such `force majeure' condition continues beyond fifteen (15) days with prior written notice. Should either party decide not to terminate the contract even under such condition, no payment would apply after expiry of fifteen (15) days period unless otherwise agreed to. Time for performance of the relative obligation suspended by the 'Force Majeure' shall then stand extended by the period for which such cause lasts. |
| **Part-3, SECTION-II (TERMS OF REFERENCE / TECHNICAL SPECIFICATIONS)** | | | |
| 2 | Clause 2.1 (a) Page 60 | Minimum width of the well site approach road = 3.66 m. | Minimum width of the well site approach road = **3.75 m**. |
| 3 | Clause 2.1 (b) Page 60 | Turning Radius = 15m (Generally), 12 m (exceptionally) | Turning Radius = **20 m** (Generally), **15 m** (exceptionally) |
| 4 | Clause 3.0 Page 60 **(SCOPE OF SERVICE)** | The Contractor shall provide the services of 01 (One) No. of 3000 HP capacity Diesel Electric Rig Package (AC-SCR or AC-VFD) with Top Drive and all necessary equipment and personnel as listed and carryout drilling operations including but not limited to coring, round tripping, lowering & setting of casings, completion, abandonment, Production testing, etc. as and when required, and all other associated operations including, rig up, rig down, | The Contractor shall provide the services of 01 (One) No. of 3000 HP capacity Diesel Electric Rig Package (AC-SCR or AC-VFD) with Top Drive and all necessary equipment and personnel as listed and carryout drilling operations including but not limited to coring, round tripping, lowering & setting of casings, completion, abandonment, Production testing, etc. as and when required, and all other associated operations including, rig up, rig down, inter-location movement etc. in accordance with the well drilling and completion programme to be furnished by the company before |

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| | | inter-location movement etc. in accordance with the well drilling and completion programme to be furnished by the company before commencement of the operation, which may be amended from time to time by reasonable modification as deemed fit by the company. The Contractor shall provide a proper and adequate Effluent Treatment Plant (ETP)/System along with its operator(s) with the Rig package for effluent management (solid or liquid) generated during operation, suitable for meeting the requirements in line with the guidelines of the State Pollution Control Board (SPCB), Ministry of Environment and Forests (MoEF) etc. and also safe disposal of the effluents. Apart from this, the Contractor shall also provide spares for the entire rig package, tools and equipment, drilling engineering services required for vertical and/or deviation drilling operations, fuel (HSD) for running the operations, Lubricant and shall carry out drilling with tools & expert supplied by the contractor. The contractor shall keep adequate stock of spares at all time for uninterrupted progress of work and make available all items listed in this document ready for use. Company shall provide suggestion on technical matters on request from contractor. However, the contractor shall be wholly responsible for rendering services as per scope of work. | commencement of the operation, which may be amended from time to time by reasonable modification as deemed fit by the company. The Contractor shall provide a proper and adequate Effluent Treatment Plant (ETP)/System along with its operator(s) with the Rig package for effluent management (solid or liquid) generated during operation, suitable for meeting the requirements in line with the guidelines of the State Pollution Control Board (SPCB), Ministry of Environment and Forests (MoEF) etc. and also safe disposal of the effluents. Apart from this, the Contractor shall also provide spares for the entire rig package, tools and equipment, ~~drilling engineering services~~ required for vertical and/or deviation drilling operations, fuel (HSD) for running the operations, Lubricant and shall carry out drilling with tools & expert supplied by the contractor. The contractor shall keep adequate stock of spares at all time for uninterrupted progress of work and make available all items listed in this document ready for use. Company shall provide suggestion on technical matters on request from contractor. However, the contractor shall be wholly responsible for rendering services as per scope of work. |
| 5 | Clause 4.1 A)<br>Page 61 | **MAST AND SUBSTRUCTURE**:<br>"Swing lift" cantilever type self-elevating mast & substructure with clear height of around 152 ft. and having static hook load capacity of minimum 1,500,000 lbs (680 MT) with 14 lines strung on traveling block, designed as per API Specifications 4F. Mast should be designed for 100 mph wind load capacity with a full rack of pipe and 115 mph on a bare mast. The Sub-structure accommodating the cantilever type mast should have minimum setback load capacity of | **MAST AND SUBSTRUCTURE**:<br>"Swing lift" cantilever type self-elevating mast & substructure with clear height ~~of around~~ **in the range of 152 ft. to 158 ft.** and having static hook load capacity of minimum 1,500,000 lbs (680 MT) with 14 lines strung on traveling block, designed as per API Specifications 4F. Mast should be designed for 100 mph wind load capacity with a full rack of pipe and 115 mph on a bare mast. The Sub-structure accommodating the cantilever type mast should have minimum setback load capacity of 800,000 (363 MT) simultaneously with hook load &/or rotary load capacity of minimum 1,500,000 lbs. (680 MT). |

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| | | 800,000 (363 MT) simultaneously with hook load &/or rotary load capacity of minimum 1,500,000 lbs. (680 MT).<br>Self-elevating type sub-structure should have a minimum floor height of 35 ft. (10.67 M) from ground level with at least 30 ft. (9.14 M) clear height under rotary beams. Substructure should be suitable to accommodate a 3000HP (minimum) electrical powered draw-works and 37.1/2" rotary table with independent drive unit. | Self-elevating type sub-structure should have a minimum floor height of ~~35~~ 33 ft. (~~10.67~~ **10.06** M) from ground level with at least ~~30~~ **28** ft. (~~9.14~~ **8.53** M) clear height under rotary beams. Substructure should be suitable to accommodate a 3000HP (minimum) electrical powered draw-works and 37.1/2" rotary table with independent drive unit. |
| 6 | Clause 4.1 A) (second para) Page 61 | Self-elevating type sub-structure should have a minimum floor height of 35 ft. (10.67 M) from ground level with at least 30 ft. (9.14 M) clear height under rotary beams. Substructure should be suitable to accommodate a 3000HP (minimum) electrical powered draw-works and 37.1/2" rotary table with independent drive unit. | Self-elevating **or Box on Box type** type sub-structure should have a minimum floor height of 35 ft. (10.67 M) from ground level with at least 30 ft. (9.14 M) clear height under rotary beams. Substructure should be suitable to accommodate a 3000HP (minimum) electrical powered draw-works and 37.1/2" rotary table with independent drive unit. |
| 7 | Clause 4.1 A) ii Page 61 | ii. The Racking board (tribbles board) shall be adjustable type and complete with suitable & effective emergency escape device (from racking board to ground). Escape device should have a seat and a suitable braking system. | The Racking board (**Monkey board / thribbles** board) shall be adjustable type and complete with suitable & effective emergency escape device (from racking board to ground). Escape device should have a seat and a suitable braking system. |
| 8 | Clause C) Page 63-64 | Rotary table as per API Spec. 7K with minimum 37½" opening and static load capacity of 650 Tons, complete with the following. All required accessories shall be provided by the Contractor. The rotary table shall have independent rotary drive unit powered by electric motor. The rotary drive system should have forward & reverse speed options. | Rotary table as per API Spec. 7K with minimum 37½" opening and static load capacity of 650 Tons, complete with the following. All required accessories shall be provided by the Contractor. The rotary table shall have independent rotary drive unit powered by electric motor **or Hydraulic Pump**. The rotary drive system should have forward & reverse speed options. |
| 9 | Clause G) vii Page 65 | Nature of pumping job should include, but not be limited to, pumping of drilling fluids, completion fluids, pre-flushes, water – both treated and plain. In the event that a requirement arises to pump acid, the Company shall | Nature of pumping job should include, but not be limited to, pumping of drilling fluids, completion fluids, pre-flushes, water – both treated and plain. In the event that a requirement arises to pump acid, the Company shall provide the pump **and suction & delivery lines**. |

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| | | provide the pump and the Contractor shall provide the suction and delivery lines. | |
| 10 | Clause (iv) g) Page 67 | Necessary provision for supplying power including electrical, to any other utility unit(s) running on electrical power including portable electric top drive system (if called for) shall be provided by the Contractor whenever required. | Necessary provision for supplying power including electrical, to any other utility unit(s) running on electrical power including portable electric top drive system ~~**(if called for)**~~ shall be provided by the Contractor whenever required. |
| 11 | Clause (v) 1. Page 67 | Offer shall include smaller gensets suitable for producing and supplying ac power when main engines are shutdown. | **Ans: YES** |
| 12 | Clause 4.2 1. A) i. Page 67-68 | 30" x 500 psi drilling Diverter system complete with all necessary fittings and suitable side outlets not less than 10" OD, remotely operated ball valves, HCR valves etc. to be mounted on 30" conductor ERW Pipe for drilling 26" hole section. Diverter line has to be extended preferably 90 mts. away from the well bore for safe disposal of gases to the atmosphere. (Bidder to specify details of the Diverter System with drawings in techno-commercial bid). | **29-1/2"** or 30" x 500 psi drilling Diverter system complete with all necessary fittings and suitable side outlets not less than 10" OD, remotely operated ball valves, HCR valves etc. to be mounted on 30" conductor ERW Pipe for drilling 26" hole section. Diverter line has to be extended preferably 90 mts. away from the well bore for safe disposal of gases to the atmosphere. (Bidder to specify details of the Diverter System with drawings in techno-commercial bid). |
| 13 | Clause ii. Page 68 | One (1) 18.3/4" x 5000 psi Annular/Spherical BOP with bottom flange of 18.3/4" x 10 M Working Pressure (Cameron/NOV/Hydril/ WOM make only). In case the bottom flange of BOP is 18.3/4" x 5M then a suitable double studded adapter flange for conversion to 18.3/4" x 10 M is also acceptable. | **Accept 10,000 psi rated 18.3/4" annular BOP and 15,000 psi rated 18.3/4" Ram BOPs with requisite crossover / adapter flanges / DSA to match the well head.**<br><br>**Note to be incorporated on page 69 as below:**<br><br>**Note:**<br>**1. BOPs should be either new or overhauled and certified & tested by the manufacturer. The certificate should not be older than one (1) Year.**<br>**2. 18-3/4" x 10,000 psi rated annular BOP and 18-3/4" x 15,000 psi rated Ram BOPs will be acceptable with requisite crossover / adapter flanges / DSA to match the well head flange (i.e. 18-3/4" x 10M).** |

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| 14 | Clause iv.<br>Page 68 | One (1) single ram BOP, 18.3/4" x 10000 psi (Cameron/NOV/Hydril/ WOM make only) having top & bottom flange of 13.5/8" x 10 M Working Pressure with 5.1/2", 5" and 5.7/8" pipe rams. The BOP shall be complete with at least 1 (one) 3.1/16" x 10M flanged side outlets (i.e. beneath the set of ram), ring joint gaskets, blind flange and required stud & nuts. | One (1) single ram BOP, 18.3/4" x 10000 psi (Cameron/NOV/Hydril/ WOM make only) having top & bottom flange of **18.3/4"** x 10 M Working Pressure with 5.1/2", 5" and 5.7/8"pipe rams. The BOP shall be complete with at least 1 (one) 3.1/16" x 10M flanged side outlets (i.e. beneath the set of ram), ring joint gaskets, blind flange and required stud & nuts. |
| 15 | Clause B) i)<br>Page 69 | One set of 3.1/16" x 10,000 psi choke manifold rigidly supported, with two each of manually and hydraulically operated chokes. As per API Spec. 16C, Latest Edition including control console mounted at derrick floor showing all necessary parameters. | **Alternatively accept 3.1/16" x 15,000 psi and 4.1/16" x 10,000 psi rated choke manifolds with requisite crossover / adapter flanges / DSA to match the well head stack.**<br><br>**Note to be incorporated on page 70 after clause B) vii) as below:**<br><br>**Note:**<br>**3.1/16" x 15,000 psi or 4.1/16" x 10,000 psi 18-3/4" x 10,000 psi rated choke manifolds with requisite crossover / adapter flanges / DSA to match the well head stack.** |
| 16 | Clause '**Note'**<br>Page 69 | **Note: BOPs should be either new or overhauled and certified & tested by the manufacturer. The certificate should not be older than one (1) Year.** | **Note: BOPs should be either new or overhauled and certified & tested by the manufacturer. The certificate should not be older than one (1) Year and should be valid during the duration of the contract.** |
| 17 | Clause C) iii)<br>Page 70 | BOP control unit shall be complete with electrical and air operated pressurizing system, capable of pressurizing up to 3000 psi. as per API Spec 16D guidelines. | BOP control unit shall be complete with **at least two pump systems, each having independent dedicated power sources,** electrical and**/or** air operated pressurizing system, capable of pressurizing up to 3000 psi. as per API Spec 16D guidelines. |
| 18 | Clause D) ii)<br>Page 70-71 | One (1) set of Portable High Pressure Testing Unit having a nominal working pressure of 15,000 psi (1055 Kg/sq.cm.) should be provided by the contractor for pressure testing of BOPs & various equipment as & when required. The unit should consist of the following:<br>Suitable pneumatic pump(s), High pressure testing manifold complete with 0-20,000 psi gauge, high pressure | One (1) set of Portable High Pressure Testing Unit having a nominal working pressure of 15,000 psi (1055 Kg/sq.cm.) should be provided by the contractor for pressure testing of BOPs & various equipment as & when required. The unit should consist of the following:<br>Suitable pneumatic **or electric** pump(s), High pressure testing manifold complete with 0-20,000 psi gauge, high pressure test stump for testing BOPs, all required valves (incl. safety & bypass), high pressure fittings, etc., |

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| | | test stump for testing BOPs, all required valves (incl. safety & bypass), high pressure fittings, etc., fluid reservoir, 0-15000 psi recorder with charts, 20,000 psi rated test hoses with all required fittings, etc. | fluid reservoir, 0-15000 psi recorder with charts, 20,000 psi rated test hoses with all required fittings, etc. |
| 19 | Clause 2. A) i) & ii) Page 71 | i) Minimum 2200 m of 5-7/8" OD, 26.3 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having Double Shoulder Tool Joint (**DSTJ**) Connection (Tool Joint OD 7" & ID 4-1/4" ID) with 150XT hard banding on box ends.<br><br>ii) Minimum 5500 m of 5-1/2" OD, 24.7 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having Double Shoulder Tool Joint (**DSTJ**) Connection (Tool Joint OD 7" & ID 4" ID) with 150XT hard banding on box ends. | **Refer Annexure – 2 below for revised specifications.** |
| 20 | Clause 2. A) iii) Page 71 | Minimum 800 m of 4" OD, 14.0 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having **XTF-39** Tool Joint Connection (Tool Joint OD 4.7/8" & ID 2.9/16" ID) with hard banding on box ends. | **Refer Annexure – 2 below for revised specifications.** |
| 21 | Clause 2. A) v) & vi) Page 72 | vi) Installation tool for installing grip-lock type rubber protectors on 5-7/8 inch OD & 5 1/2" OD drill pipe with adequate numbers of rubber protectors for the entire contractual period. | vi) Installation tool for installing ~~grip-lock type~~ rubber protectors on 5-7/8" OD & 5-1/2" OD drill pipe with adequate numbers of rubber protectors for the entire contractual period. |
| 22 | Clause B) vii) Page 72 | Twenty-Four (24) nos. 5-1/2" OD, 3-1/4" ID, approx. 60 PPF, 30-31 ft. long having 7" OD x 3-1/4" ID Tool Joints "Spiral heavy-weight (thick wall)" drill pipes with Double Shoulder Tool Joint (DSTJ) box-up & pin down connection. | **Refer Annexure – 2 below for revised specifications.** |
| 23 | Clause B) viii) Page 72 | Fifty-One (51) nos. 5" OD, 3" ID, approx. 50 PPF, 30-31 ft. long, 6-5/8" OD x 3" ID Tool Joints "Spiral heavy-weight (thick wall)" drill pipes with Double Shoulder Tool Joint (DSTJ) box-up & pin down connection. | **Refer Annexure – 2 below for revised specifications.** |

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| 24 | Clause B)<br>ix) & x)<br>Page 72 | ix) Twenty-One (21) nos. 4” OD, 2-9/16” ID, approx. 28 PPF, 30-31 ft. long, 4-7/8” OD x 2-9/16” ID Tool Joints “Spiral heavy-weight (thick wall)” drill pipes with XTF39 box-up & pin down connection.<br><br>x) Nine (9) nos. 2-7/8” OD, 1-1/2” ID, approx. 16 PPF, 30-31 ft long, 3.3/8” OD x 1-1/2” ID Tool Joints “Spiral heavy-weight (thick wall)” drill pipes with NC 38 (3.1/2 IF) box-up & pin down connection with stress relief grooves. | **Refer Annexure – 2 below for revised specifications.** |
| 25 | Clause C.2<br>Page 73-74 | **CROSS OVER SUB**<br>i) Two (2) Nos. of 8" OD x 6-5/8" API regular box up and 9-1/2" OD x 7-5/8" API regular pin down cross over sub.<br>ii) Two (2) Nos. of 7" OD x 5-1/2" DSTJ box up and 8" OD x 6-5/8" API regular pin down cross over sub.<br>iii) Four (4) Nos. of 7” OD x 5-7/8” DSTJ box up and 5-1/2” DSTJ pin down cross over sub.<br>iv) Four (4) Nos. of 6-3/4” OD x 4-1/2” API IF box up and 7” OD x 5-1/2” DSTJ pin down cross over sub.<br>v) Four (4) Nos. of 7” OD x 5-1/2” DSTJ box up and 6-3/4” OD x 4-1/2” API IF pin down cross over sub.<br>vi) Two (2) Nos. 6-3/4" OD cross over sub with 4-1/2" API regular box down x 4-1/2" API IF box up connections.<br>vii) Four (4) Nos. of 7” OD x 5-1/2” DSTJ box up and 6-5/8” OD x 5” DSTJ pin down cross over sub.<br>viii) Three (3) Nos. of 6-5/8” OD cross over sub with 5” DSTJ box up x 4-1/2" API IF pin down connections.<br>ix) Three (3) Nos. of 6-5/8” OD cross over sub with 4-1/2" API IF box up x 5” DSTJ pin down connections.<br>x) Two (2) Nos. of 4-7/8” OD cross over sub with 4" XTF-39 box up x 3-1/2” API IF pin down connections.<br>xi) Two (2) Nos. of 6-5/8” OD x 5” DSTJ box up and 4-7/8” OD x 4” XTF-39 pin down cross over sub. | **Refer Annexure – 2 below for revised specifications.** |

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| | | xii) Two (2) Nos. of 4-7/8" OD x 4" XTF-39 box up and 3-7/8" OD x 2-7/8" SLH90 pin down cross over sub.<br>xiii) Two (2) Nos. of 3-1/2" API IF box up and 3-1/2" API IF pin down cross over sub.<br>xiv) Two (2) Nos. of 2-3/8" API IF box up and 2-3/8" API Regular pin down cross over sub.<br>xv) Two (2) Nos. of 2-7/8" SLH90 box up and 2-3/8" API IF pin down cross over sub.<br>xvi) Sufficient and suitable x-over subs for connecting the tubular with top drive sub.<br>xvii) Twin pin sub of following specifications:<br>1. One (1) No. of 9-1/2" OD, 3" ID with 7-5/8" API Regular pin at both ends.<br>2. One (1) No. of 8-1/4" OD, 2-13/16" ID with 6-5/8" API Regular pin at both ends.<br>3. One (1) No. of 6-3/4" OD, 2-1/2" ID with 4-1/2" API Regular pin at one end and 4-1/2" API IF pin at other end.<br>4. One (1) No. of 4-3/4" OD, 1-1/2" ID with 3-1/2" API Regular pin at one end and 3-1/2" API IF pin at other end. | |
| 26 | Clause (f)<br>Page 78 | **HYDRAULIC TUBULAR HANDLING TOOLS**<br>i) Hydraulic power casing tongs (one for use & one back-up) complete with all accessories and hydraulic power unit with suitable prime mover (electric motor or diesel engine), standard accessories and pivot head for 20", 16", 13.3/8", 11.3/4", 9.5/8", 7", 5.1/2" & 5" OD casings. The tongs should be rated for a torque of minimum 25000 ft-lbs.<br>ii) Hydraulic Power Tubing Tong (one for use & one back-up) complete with all accessories including back-up assembly and hydraulic power unit with suitable prime mover for handling 2.7/8" & 3.1/2" OD (EUE / NUE | i) Hydraulic power casing tongs (one for use & one back-up) complete …… a torque of minimum 25000 ft-lbs.<br>ii) Hydraulic Power Tubing Tong (one for use & one back-up) complete …… capacity of around 8000 ft-lbs.<br>iii) The operator(s) for power casing tong shall be provided by the contractor at their own cost.<br>vi) Any other tongs as felt necessary by the contractor **to facilitate handling of specified casings / tubings**. Supply of tongs for all **the above specified tubular** ~~jobs~~ shall be the responsibility of the contractor. |

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| | | Premium tubing) with torque capacity of around 8000 ft-lbs.<br><br>iii) The operator(s) for power casing tong shall be provided by the contractor at their own cost.<br>vi) Any other tongs as felt necessary by the contractor. Supply of tongs for all jobs shall be the responsibility of the contractor. | |
| 27 | Clause G) ii) Page 78 | One (1) set consisting of 2 nos. each size clamp-on or equivalent casing thread protectors for 20", 16", 13.3/8", 11.3/4", 9.5/8", 7", 5.1/2" & 5" sizes. | **Deleted** |
| 28 | Clause H) ii) Page 78 | **Man-rider**: One (1) No. of Air winch for use as man-rider of minimum capacity of 2200 lbs (1 MT) mounted on derrick floor (at suitable place) complete with ½" soft wire line and full body harness. | **Man-rider**: One (1) No. of Air winch for use as man-rider of minimum capacity of **330 lbs (150 Kgs)** mounted on derrick floor (at suitable place) complete with ½" soft wire line and full body harness. |
| 29 | Clause K) i) Page 80 | Contractor shall provide One (1) no. of Trailer mounted Engine driven fire pump having minimum discharge of 1800 L/min at 7 kg/cm2 along with two nos. of storage tanks each having 53 KL capacity and adequate nos. of monitors and hydrant for fire emergencies with all accessories (suction hose, delivery hose, nozzle, tools etc.) to be provided by Contractor at Well-site along with personnel having firefighting training and certificate. | Contractor shall provide One (1) no. of Trailer mounted **or Skid mounted** Engine driven fire pump having minimum discharge of 1800 L/min at 7 kg/cm2 along with two nos. of storage tanks each having 53 KL capacity and adequate nos. of monitors and hydrant for fire emergencies with all accessories (suction hose, delivery hose, nozzle, tools etc.) to be provided by Contractor at Well-site along with personnel having firefighting training and certificate. |
| 30 | Clause N) Page 82 | **DROP-IN TYPE DRIFT RECORDER:** One (1) set of 0-21 degree double recorder complete with barrel and all required accessories including charts & chart reader, etc. Adequate nos. of baffle plates for various bit sizes shall also be provided by the Contractor. | One (1) set of **0-16** degree double recorder complete with barrel and all required accessories including charts & chart reader, etc. Adequate nos. of baffle plates for various bit sizes shall also be provided by the Contractor. |

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| 31 | Clause O)<br>Page 82 | **SLICK LINE WINCH**: One (1) Mathey Surveyor 2007 or equivalent electric powered wire line unit complete with all controls, floor sheave with line wiper, "O" meter, weight indicator, drum with 25000' of 0.092" OD wire-line conforming to API Spec 9A, power drive assembly, etc. for running the deviation survey units or any other small tool in hole.<br>(**Note**: In case the draw-works offered is double drum i.e. with sand line then the slick line winch is not required provided, the sand line is of sufficient length i.e. not less than 7000 Mtrs.] | **Deleted from scope** |
| 32 | Clause Q) c)<br>Page 83 | Mud testing laboratory inclusive of all well site testing equipment as per following list to be provided by the Contractor.<br>a. Baroid Mud Balance # 2 nos. (1 for Mud cabin for Attendant & 1 for Mud testing Laboratory)<br>b. Marsh Funnel Viscometer # 1 no.<br>c. Fann VG meter # 1 no.<br>d. API Fluid Loss Apparatus # 1 no.<br>e. High Pressure/High Temperature Fluid Loss Apparatus # 1 no.<br>f. Lubricity Test Equipment # 1 no.<br>g. pH Meter # 1 no.<br>h. Salinity Measurement Kit # 1 set<br>i. Sand Content Measurement apparatus # 1 no.<br>j. 2 Pan Balance # 1 no.<br>k. Mud Retort # 1 no. | **Deleted from scope** |
| 33 | Clause B) iii)<br>Page 87 | One (1) No. air receiver hydraulically tested within last three years with documentary evidence having a capacity of 100 CFT and rated for 265 psig test pressure complete with air dryer, safety relief valve, pressure gauge, condensate trap etc. | ~~One (1) No.~~ **Air** receiver**(s)** hydraulically tested within last three years with documentary evidence having a **total** capacity of 100 CFT and rated for 265 psig test pressure complete with air dryer, safety relief valve, pressure gauge, condensate trap etc. |

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| 34 | Clause C) a) Page 87 | **Three Nos. water tanks (also to be used as gauging water tank):**<br>Rectangular with covered top having approximate dimensions 9.9 m long x 2.285 wide x 2.25 height on a four runner skid, with drain out valve, equalizing coupling ladders both in and out of tank. Each tank shall have a man hole opening of 20" x 20" to go inside for cleaning purpose. Each water tank shall have two mixing agitators for homogeneous mixing of chemicals (gauging water) and also the tanks shall have minimum dead volumes.<br>Total storage capacity: 150 cubic meter (approx.)<br>One Master Skid, 4 runners 10' wide x 32' long for placing the three water tanks. And the skid should be fitted with two centrifugal pumps (as water booster) having capacity minimum 80 $m^3$ per hour and 26 m (minimum) head with 40 HP explosion proof 415 volts, 50 Hz, 3 phase electric motors and complete with suction and discharge lines for operation of either or both pumps.<br>One set piping: Std. size & complete with suitable valves for supply of water to mud system from the above 3 tanks.<br>Two (2) Electric motor driven horizontal multistage centrifugal pumps set complete with piping/ Dresser type couplings and butterfly valves should be mounted on an independent three runner oilfield skid. These pump sets will be used to load chemicals through hoppers to water tanks, to agitate the mixture by jet gun and to feed chemical-mixed (gauging) water in the cement hopper for preparation of cement slurry. Each horizontal multi stage centrifugal pump should be capable of developing minimum 150 m. of head and the discharge of each pump should be minimum 60.0 m3 / hr at 1450 rpm. | **Three Nos. water tanks (also to be used as gauging water tank):**<br>**Three Nos. tanks** with covered top, drain out valve, equalizing coupling, ladders both in and out of tank. Each tank shall have a manhole opening of 20" x 20" to go inside for cleaning purpose. **All the three tanks should be interconnected to facilitate suction from any of the tanks; however, there should be valves to isolate each tank if operation demands. Two of the three** water tanks shall have two mixing agitators for homogeneous mixing of chemicals (gauging water) and the tanks shall have minimum dead volumes.<br>Total storage capacity: 150 cubic meter (approx.)<br>Two Nos. centrifugal pumps (as water booster) having minimum capacity of 80 $m^3$ per hour and 26 m (minimum) head coupled with 40 HP explosion proof 415 volts, 50 Hz, 3 phase electric motors and complete with suction and discharge lines for operation of either or both pumps. **The pump units should be mounted on a single oilfield skid.**<br>One set piping: Std. size & complete with suitable valves for supply of water to mud system from the above 3 tanks.<br>Two (2) Electric motor driven horizontal multistage centrifugal pumps set complete with piping/ Dresser type couplings and butterfly valves, should be mounted on an independent oilfield skid. These pump sets will be used to load chemicals through hoppers to water tanks, to agitate the mixture by jet gun and to feed chemical-mixed (gauging) water in the cement hopper for preparation of cement slurry. Each horizontal multi stage centrifugal pump should be capable of developing minimum 150 m. of head and the discharge of each pump should be minimum 60.0 m3 / hr at 1450 rpm. |

<table>
<tr>
<td>35</td>
<td>Clause D)<br>**Note**: i)<br>Page 88</td>
<td>In case, the rig remains idle for want of a minimum required quantity of acceptable quality water, then 'NIL' day rate shall be applicable for the entire period of shut-down.</td>
<td>In case, the rig remains idle for want of a minimum required quantity of acceptable quality water (as per the following parameters), then 'NIL' day rate shall be applicable for the entire period of shut-down.
<table>
<tr><th>Characteristics</th><th>Acceptable Limits (as per BIS, IS-10500-2012)</th></tr>
<tr><td>Odour</td><td>Agreeable</td></tr>
<tr><td>PH</td><td>6.5 to 8.5</td></tr>
<tr><td>Turbidity</td><td>5.0 NTU (Max.)</td></tr>
<tr><td>Chorides (as $Cl^{-}$)</td><td>250 mg/l (Max.)</td></tr>
<tr><td>Total Hardness (as $CaCO_3$)</td><td>200 mg/l (Max.)</td></tr>
<tr><td>Iron (as $Fe^{+2}$)</td><td>0.3 mg/l (Max.)</td></tr>
<tr><td>Total Dissolved Solids</td><td>500 mg/l (Max.)</td></tr>
<tr><td>Alkalinity (as $CaCO_3$)</td><td>200 mg/l (Max.)</td></tr>
<tr><td>Mineral Oil</td><td>0.5 mg/l (Max.)</td></tr>
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<tr>
<td>36</td>
<td>Clause (K)<br>Page 90</td>
<td>PROVIDING POWER TO PRODUCTION SETUP AT DRILLING LOCATION<br>It shall be the responsibility of the Contractor to supply power to production setup if required, as long as “rig-down” is not declared. The Contractor can stop power supply to such production facilities after rig-down is declared.</td>
<td>PROVIDING POWER TO PRODUCTION SETUP AT DRILLING LOCATION<br>It shall be the responsibility of the Contractor to supply power to production setup if required (Power Supply should be 50 Hz, 415 V, 3 Phase without neutral), as long as “rig-down” is not declared. The Contractor can stop power supply to such production facilities after rig-down is declared.</td>
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| 37 | Clause (d)<br>Page 91 | **Online Gas Monitoring System:** Online Gas Monitoring System shall be capable of continuous monitoring of three gases particularly Hydrogen Sulphide ($H_2S$), Carbon Monoxide (CO) and Methane ($CH_4$). The system shall consist of Multi-Gas detectors/Single Gas detectors for detection of these three gases. The system shall also consist of a control unit for continuous monitoring, measurement and generation of audio-visual warning alarm. There are two gas detection locations in the Rig, one is at Well Head and another is at the Shale Shaker. The system shall be capable of monitoring all the three gases in these two locations. Gas detected shall be measured and displayed locally at the detectors and as well as in the common controller/display unit to be located at Dog house/Rig-superintendent's office. But, the explosion proof Hooter & Flasher shall be mounted at rig-floor. Calibration Kit & Accessories shall be provided along with the system for periodic calibration and maintenance of the system, the record of which shall be maintained as per norms. | **Online Gas Monitoring System:** Online Gas Monitoring System shall be capable of continuous monitoring of **two** gases particularly Hydrogen Sulphide ($H_2S$), ~~Carbon Monoxide (CO)~~ and Methane ($CH_4$). The system shall consist of Multi-Gas detectors/Single Gas detectors for detection of these **two** gases. The system shall also consist of a control unit for continuous monitoring, measurement and generation of audio-visual warning alarm. There are two gas detection locations in the Rig, one is at Well Head and another is at the Shale Shaker. The system shall be capable of monitoring all the **two** gases in these two locations. Gas detected shall be measured and displayed ~~locally at the detectors and as well as~~ in the common controller/display unit to be located at Dog house **and** Rig-superintendent's office. But, the explosion proof Hooter & Flasher shall be mounted at rig-floor. Calibration Kit & Accessories shall be provided along with the system for periodic calibration and maintenance of the system, the record of which shall be maintained as per norms. |
| 38 | Clause (b)<br>**General Notes**<br>Page 93 | (b) Approximate transportable dimension of one rig load should be confined to 9 M (L) x 3.5 M (W) x 3 M (H). | Approximate transportable dimension of one rig load should be confined to 9 M (L) x 3.5 M (W) x 3 M (H) **or as permissible as per prevailing Motor Vehicle (MV) act of India.** |
| 39 | Clause (l)<br>**General Notes**<br>Page 94 | (l) All the engines to be used in rig package should preferably be EURO-3 compliant and engines for transportation vehicles should be minimum EURO-3 compliant. | All the engines to be used in rig package should preferably be EURO-3 compliant ~~and engines for transportation vehicles should be minimum EURO-3 compliant.~~ |

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| 40 | Clause 4.4.3<br>Page 95 | Grouting as well as necessary sizing / adjustment in length of false conductor with available cut pieces is Contractor's responsibility. The raw materials for fabrication of false conductor will be supplied by the Company but fabrication to be done by the Contractor at well site including grouting of the same. | ~~Grouting as well as~~ **Fabrication including** necessary sizing / adjustment in length of false conductor with available cut pieces is Contractor's responsibility. The raw materials for fabrication of false conductor will be supplied by the Company but fabrication to be done by the Contractor at well site **including landing / placement of same**. **Grouting of false conductor will be done by company.** |
| 41 | Clause 4.4.3<br>NOTE: i)<br>Page 95 | i) Setting up of camp is the sole responsibility of the Contractor. However, Company may provide land for setting up camp at well site subject to availability of sufficient land. In case the available land is found inadequate then the contractor at his own cost shall arrange additional land for setting up the camp. For the camp, the Contractor shall take all responsibilities for preparation of site, making foundation as per their requirement etc. | Setting up of camp is the sole responsibility of the Contractor. However, Company may provide land for setting up camp at well site subject to availability of sufficient land. In case the available land is found inadequate then the contractor at his own cost shall arrange additional land for setting up the camp. For the camp, the Contractor shall take all responsibilities for preparation of site, making foundation as per their requirement etc.<br>**Note: Company will built septic tank / soak pit for the camp.** |
| 42 | Clause K.<br>Page 98 | **MEDICAL SERVICES**: Suitable first aid medical services shall be provided by the Contractor on round the clock basis with an attending registered Doctor (minimum MBBS degree holder) on call 24 Hrs. a day. The Doctor shall be available at site at all times during the entire contractual period with sufficient quantity of First-Aid equipment & medicines to meet any emergency. | **MEDICAL SERVICES**: Suitable first aid medical services shall be provided by the Contractor on round the clock basis with an attending **Medic or** Doctor ~~(minimum MBBS degree holder)~~ on call 24 Hrs. a day. The Doctor shall be available at site at all times during the entire contractual period with sufficient quantity of First-Aid equipment & medicines to meet any emergency. |

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| 43 | Clause L<br>Page 98-99 | **CAMP INFRASTRUCTURE & FACILITIES:**<br>Industry standard camp facilities for the Contractor's personnel (inclusive of third party Contractor's personnel) including camp site dispensary, catering, sanitation & laundry services shall be provided by the Contractor. Additionally, fully furnished air-conditioned bunk house type accommodation should be provided by Contractor for at least 25 (Twenty-five) numbers of Company's personnel or any third party representatives to be designated by Company. The camp should be well maintained with normal recreational facilities including DVD / VCD player, LCD/LED TV with DTH, music system etc. at the Contractor's cost. The camp facilities to be provided by the Contractor to the Company should include but not be limited to the following:<br><br>d) 1 (One) office cum living unit for Company's Representative at site. The unit should be equipped with refrigerator, computer, internet with e-mail, printer, scanner, fax machine & other communication equipment. This unit should be near to rig superintendent's office and should have inter-connection.<br><br>g) The Company reserves the right to avail catering services at well site la-carte (other than fixed menu) with room service.<br><br>**NOTE**:<br>iii) A separate area is to be demarcated for placement of above living bunk houses at campsite for Company's personnel. The area is to be properly levelled with suitable drainage system, fenced (with XPM / barbed wire fencing) and well protected. | Industry standard camp facilities for the Contractor's personnel (inclusive of third party Contractor's personnel) including camp site dispensary, catering, sanitation & laundry services shall be provided by the Contractor. Additionally, fully furnished air-conditioned bunk house type accommodation should be provided by Contractor for at least 25 (Twenty-five) numbers of Company's personnel or any third party representatives to be designated by Company. The camp should be well maintained with normal recreational facilities including ~~**DVD / VCD player**~~, LCD/LED TV with DTH, ~~**music system**~~ etc. at the Contractor's cost. The camp facilities to be provided by the Contractor to the Company should include but not be limited to the following:<br><br>d) 1 (One) office cum living unit for Company's Representative at site. The unit should be equipped with refrigerator, computer, internet with e-mail, printer, scanner, fax machine & other communication equipment. This unit should be near to rig superintendent's office and should have inter-connection.<br><br>g) The Company ~~reserves the right to~~ **would** avail catering services at well site ~~la-carte (other than fixed menu)~~ **with fixed menu.** ~~room service~~.<br><br>**NOTE**:<br>iii) A separate area is to be demarcated for placement of above living bunk houses at campsite for Company's personnel. The area is to be properly levelled with suitable drainage system, fenced (with XPM / barbed wire fencing) and well protected. |

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| 44 | Clause L<br>a), b), c) & g)<br>Page 99 | a) 3 (Three) 1-seater unit accommodations with attached bath and toilet.<br>b) 3 (Three) 2-seater unit accommodation with attached bath & toilet.<br>c) 4 (Four) 4-seater accommodation with attached bath & toilets.<br>g) The Company reserves the right to avail catering services at well site la-carte (other than fixed menu) with room service. | **No changes to clauses (a), (b) & (c).**<br><br>g) The Company ~~reserves the right to~~ **would** avail catering services at well site ~~la-carte (other than fixed menu)~~ **with fixed menu.** ~~room service~~. |
| 45 | Clause N. i)<br>Page 100 | **OTHERS:**<br>i) The Contractor shall provide one no. chemical godown with floor space of approx. 660 Sq. ft. of appropriate dimensions with proper raised brick soled cemented/ wooden flooring for storing of chemicals, LCM etc. | i) The **Company** shall provide one no. chemical godown with floor space of approx. 660 Sq. ft. of appropriate dimensions with proper raised brick soled cemented/ wooden flooring for storing of chemicals, LCM etc. |
| 46 | Clause N. i)<br>Page 100 | | |

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<tr>
<td>47</td>
<td>Clause O. i)<br>Page 100-101<br>PERSONNEL TO BE DEPLOYED:</td>
<td>
<table>
<tr><th>Position</th><th>Total per day</th><th>Day time shift</th><th>Night time Shift</th><th>Off</th><th>Allocated per Rig</th></tr>
<tr><td>Derrick men / Top man</td><td>4</td><td>2</td><td>2</td><td>4</td><td>8</td></tr>
<tr><td>Roughneck /Floor man</td><td>8</td><td>4</td><td>4</td><td>8</td><td>16</td></tr>
<tr><td>Instrumentation Engr.</td><td>1</td><td colspan="2">1</td><td>1</td><td>2</td></tr>
<tr><td>Top Drive Operator / Technician</td><td>2</td><td>1</td><td>1</td><td>2</td><td>4</td></tr>
<tr><td>Telephone Attendant / Radio Operator</td><td>2</td><td>1</td><td>1</td><td>2</td><td>4</td></tr>
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<td>
Revised table as under:
<table>
<tr><th>Position</th><th>Total per day</th><th>Day time shift</th><th>Night time Shift</th><th>Off</th><th>Allocated per Rig</th></tr>
<tr><td>Derrick men / Top man</td><td>4</td><td>2</td><td>2</td><td>4</td><td>8</td></tr>
<tr><td>Roughneck /Floor man</td><td>8</td><td>4</td><td>4</td><td>8</td><td>16</td></tr>
<tr><td>~~Instrumentation Engr.~~</td><td>~~1~~</td><td colspan="2">~~1~~</td><td>~~1~~</td><td>~~2~~</td></tr>
<tr><td>~~Top Drive Operator / Technician~~</td><td>~~2~~</td><td>~~1~~</td><td>~~1~~</td><td>~~2~~</td><td>~~4~~</td></tr>
<tr><td>~~Telephone Attendant / Radio Operator~~</td><td>~~2~~</td><td>~~1~~</td><td>~~1~~</td><td>~~2~~</td><td>~~4~~</td></tr>
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<td>48</td>
<td>Clause iii) a.<br>Page 101</td>
<td>RIG MANAGER/RIG SUPERINTENDENT<br>i) <u>Qualification</u>: Graduate in Engineering / Science or three years Diploma in Engineering.<br>ii) <u>Experience</u>:<br>a. Should have work experience in deep drilling oil / gas wells, for minimum 10 years (for Graduate Engineers) / 12 years (for Science graduate / diploma in Engg.), of which at least 5 years should be in a senior management level<br>b. Should be conversant with working in diesel electrical rigs/supplied rig.</td>
<td>Revised qualifications & experience criteria as per Annexure-1 below.</td>
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| | | c. Should be conversant with mud chemicals & maintenance of mud property.<br>d. Should have completed at least 3 (three) wells of minimum 5000m depth.<br>iii) **Certification / License / Health:**<br>a. Must possess valid well control certificate (IWCF-Supervisor Level / Level-4) and should be conversant with well control methods to take independent decisions in case of well emergencies.<br>b. Should be of sound health to work in adverse weather condition in drilling well. | |
| 49 | Clause iii) b. Page 101-102 | **b. TOOL PUSHER:**<br>i) **Qualification**: Graduate in Engineering / Science or three years Diploma in Engineering.<br>ii) **Experience**:<br>a. Should have work experience in deep drilling oil / gas wells, for minimum 10 years (for Graduate Engineers) / 12 years (for Science graduate / diploma in Engg.), of which at least one year as tool pusher in exploratory & development wells.<br>b. Should be conversant with working in diesel electrical rigs/supplied rig.<br>c. Should be conversant with mud chemicals & maintenance of mud property.<br>d. Should have completed at least 2 (two) well of minimum 5000m depth.<br>iii) **Certification / License / Health:**<br>a. Must possess valid well control certificate (IWCF-Supervisor Level / Level-4) and should be conversant with well control methods to take independent decisions in case of well emergencies. | **Revised qualifications & experience criteria as per Annexure-1 below.** |

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| | | b. Should be of sound health to work in adverse weather condition in drilling well. | |
| 50 | Clause c.<br>Page 102 | **c. TOUR PUSHER / NIGHT TOOL PUSHER:**<br>i) **Qualification**: Graduate in Engineering / Science or three years Diploma in Engineering.<br>ii) **Experience**:<br>a. Should have work experience in deep drilling oil / gas wells, for minimum 6 years (for Graduate Engineers) / 8 years (for Science graduate / diploma in Engg.),, of which at least one year as tool / tour pusher in exploratory & development wells.<br>b. Should be conversant with working in diesel electrical rigs/supplied rig.<br>c. Should be conversant with mud chemicals & maintenance of mud property.<br>d. Should have completed at least one well of minimum 5000m depth<br>iii) **Certification / License / Health:**<br>a. Must possess valid well control certificate (IWCF-Supervisor Level / Level-4) and should be conversant with well control methods to take independent decisions in case of well emergencies.<br>b. Should be of sound health to work in adverse weather condition in drilling well. | **Revised qualifications & experience criteria as per Annexure-1 below.** |
| 51 | Clause a. iii) a.<br>b. iii) a. and<br>c. iii) a.<br>Page 101-102 | Must possess valid well control certificate (IWCF-Supervisor Level / Level-4) and should be conversant with well control methods to take independent decisions in case of well emergencies. | **Agreed to IADC WellSharp-L4. Refer Annexure-1 below.** |
| 52 | Clause d.<br>Page 102 | **d. DRILLER:**<br>i) **Qualification**: Graduate in Science or three years Diploma in Engineering. | **Revised qualifications & experience criteria as per Annexure-1 below.** |

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| | | ii) **Experience**:<br>a. Should have work experience in deep drilling oil / gas wells, for minimum 5 years, of which at least one year as Shift in charge / Driller of exploratory & development wells.<br>b. Should be conversant with working in diesel electrical rigs/supplied rig.<br>c. Should be conversant with mud chemicals & maintenance of mud property.<br>d. Should have completed at least one well of minimum 4000m depth<br>iii) **Certification / License / Health:**<br>a. Must possess valid well control certificate (IWCF-Driller Level / Level-3) and should be conversant with well control methods to detect well kick, shut the well and assist Tool Pusher / Tour Pusher in case of well emergencies.<br>b. Should be of sound health to work in adverse weather condition in drilling well. | |
| 53 | Clause e.<br>Page 102 | **e. ASSISTANT DRILLER:**<br>i) **Qualification**: SSC / HS / PU / I.Sc. or equivalent.<br>ii) **Experience**:<br>a. Should have work experience in deep drilling oil / gas wells, for minimum 4 years, of which at least one year as Asst. Driller / Head-man of exploratory & development wells.<br>b. Should be conversant with working in diesel electrical rigs/supplied rig.<br>c. Should be conversant with mud chemicals & maintenance of mud property.<br>d. Should have completed at least one well of minimum 4000m depth | **Revised qualifications & experience criteria as per Annexure-1 below.** |

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| | | iii) **Certification / License / Health:**<br>a. Must possess valid well control certificate (IWCF-Driller Level / Level-3) and should be conversant with well control methods to detect well kick, shut the well and assist Tool Pusher / Tour Pusher in case of well emergencies.<br>b. Should be of sound health to work in adverse weather condition in drilling well. | |
| 54 | Clause f.<br>Page 103 | **f. DERRICKMAN / TOPMAN:**<br>i) **Qualification**: Minimum 8th standard (class-VIII) passed.<br>ii) **Experience:** Should have work experience of minimum 1 year as Derrick man / Top man in a drilling rig. | **Refer Annexure-1 below for revised clause'.** |
| 55 | Clause g.<br>Page 103 | **g. ROUGHNECK / FLOOR-MAN:**<br>i) **Qualification**: Minimum 8th standard (class-VIII) passed.<br>ii) **Experience:** Should have work experience of minimum 1 year as Roughneck / Floor man / Rig man in a drilling rig. | **Refer Annexure-1 below for revised clause'.** |
| 56 | Clause h.<br>Page 103 | **h. CHIEF MECHANIC:**<br>i) Should have a minimum of 3 years' work experience as Master mechanic in drilling rigs.<br>ii) Should have sufficient knowledge of operation and maintenance of Drilling rigs and its components viz. engines, rig pumps, supercharge pumps, centrifugal pumps, solid control equipment, degasser, shale shaker and all other mechanical items / engines operating in drilling rigs.<br>iii) Qualification: Diploma in Mechanical/ Chemical B.Sc. or equivalent with 3 years of experience or SSC/HS/PU/I. SC or equivalent with 6 years of experience, of which at least one year should be as Chief Mechanic in Drilling rigs. | **Refer Annexure-1 below for revised clause'** |

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| 57 | Clause i. i)<br>Page 103 | **i. ELECTRICAL ENGINEER / CHIEF ELECTRICIAN:**<br>i) Should have a Degree in Electrical Engineering with a minimum of 3 years' experience or Diploma in Electrical Engineering with a minimum of 5 yrs. experience as an Electrician in Diesel Electric (AC-SCR / AC-VFD) drilling rigs. | **Refer Annexure-1 below for revised clause'.** |
| 58 | Clause j.<br>Page 103 | **j. INSTRUMENTATION ENGINEER:**<br>i) Should have a Degree in Instrumentation Engineering with a minimum of 3 years' experience or Diploma in Instrumentation with a minimum of 5 yrs. experience as an Instrumentation Engineer in drilling rigs.<br>ii) Should be confident in independently carrying out the fault finding analysis, rectification of fault, operation and maintenance of all Instrumentation systems of the Rig. | **Deleted** |
| 59 | Clause k.<br>Page 103-104 | **k. MECHANIC (IC) / (PUMP)**<br>i) Should have a minimum working experience as Master mechanic in drilling rig.<br>ii) Should have sufficient knowledge of operation and maintenance of Drilling / work-over rigs and its components viz. engines, rig pumps supercharge pumps, centrifugal pumps, solid control equipment, degasser, shale shaker and all other mechanical items/engines operating in drilling rigs.<br>iii) Qualification: Diploma in Mechanical/ Chemical, B.Sc or equivalent with 3 years' experience or SSC/HS/PU/I.Sc or equivalent with 6 years' experience. Out of which at least one year as Mechanic in Drilling rig. | **Revised qualifications & experience criteria as per Annexure-1 below.** |

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| 60 | Clause l. i) Page 104 | **l. ELECTRICIAN:** i) Must be Diploma in Electrical Discipline with minimum 3 yrs. Experience or ITI (preferably Two year course from Govt. recognized institutes) in Electrical Discipline with minimum 8 years' experience respectively in the operation and maintenance of diesel electric drilling rig independently in shifts. | **Refer Annexure-1 below for revised clause'.** |
| 61 | Clause m. ii) Page 104 | **m. WELDER:** ii) Must possess the valid certificate of welding trade from any recognized institute of State Govt. (One year course). | ii) Must possess the valid certificate of welding trade from any recognized institute of State Govt. ~~(One year course).~~ |
| 62 | Clause p. Page 104 | **p. TOP DRIVE OPERATOR / TECHNICIAN:** Should be of sound health and have at least two (2) years' work experience in operating, rigging-up & rigging-down a similar top drive unit attached to drilling rig. | **Deleted** |
| 63 | Clause H (3) on Page 92 | The treatment process shall be of chemical separation and mechanical separation. The treatment of liquid effluent may be by coagulation & flocculation and Reverse Osmosis (RO) methods, however, the treated liquid effluents shall meet norms of CPCB guidelines. | The treatment process shall be of chemical separation and mechanical separation. The treatment of liquid effluent **should** be by coagulation & flocculation and Reverse Osmosis (RO) methods, however, the treated liquid effluents shall meet norms of CPCB guidelines. |
| **Part-3, Section-III (Special Conditions of Contract)** | | | |
| 64 | Clause 5.11 Page 113 | **Cuttings Samples**: Contractor shall save and collect cuttings samples according to company's instructions and place them duly labelled in containers furnished by company. | **Cuttings Samples**: Contractor shall save and collect cuttings samples according to company's instructions **and store them accordingly.** ~~place them duly labelled in containers furnished by company.~~ |
| 65 | Clause 6.3 ii) Page 116 | Daily mud report on IADC pro-form including mud stock, daily consumption and stock position of chemicals and daily mud hydraulics. | **Deleted** |

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| 66 | Clause 6.3 vii) Page 116 | Bit performance record: After completion of each well. | **Deleted** |
| 67 | Clause 6.9 (b) (ii) a Page 117 | The Contractor shall carry out inspections of down hole tubulars, equipment and tools regularly in use, at reasonable interval to the standard of TH HILL DS1-Level 2 at contractor's cost. | The Contractor shall carry out inspections of down hole tubulars, equipment and tools regularly in use, at reasonable interval to the standard of TH HILL DS1-Level ~~2~~ **4** at contractor's cost. |
| 68 | Clause 6.9 (b) (ii) b Page 118 | The Contractor shall carry out non-destructive test / inspection of Mast & Sub-structure at reasonable interval at Contractor's cost. | The Contractor shall carry out non-destructive test / inspection of Mast & Sub-structure ~~at reasonable interval at Contractor's cost~~ **prior to mobilization of the Rig such that the NDT certificate shall be valid for the entire duration of the contract.** |
| 69 | Clause 9.0 Page 121 | **LIABILITY FOR THE WELL**: The Company shall be liable for the cost of regaining control of any wild well as well as the cost of removal of debris, and shall indemnify Contractor, for any such cost, regardless of the cause thereof, including but not limited to the negligence of Contractor, its Agents, Employees or sub-contractors Operator shall be responsible for and shall indemnify and hold harmless Contractor from any claims in respect of loss or damage to the hole or well. In the event the hole is lost or damaged because of the negligence of Contractor, Contractor's sole responsibility thereafter shall be the obligation to repair such damage within the limits of Contractor's normal complement of equipment and personnel or re-drill the hole in the same well or an alternate well to the depth at which, such hole was lost at a rate equal to fifty (50) percent of the applicable operating day rate only by deploying the drilling unit and personnel provided however, that in the case of any relief well, Operator shall be solely responsible for all other costs or damage with respect to such loss or damage, regardless of the cause of such loss or damage. | The Company shall be liable for the cost of regaining control of any wild well as well as the cost of removal of debris, and shall indemnify Contractor, for any such cost, regardless of the cause thereof, including but not limited to the negligence of Contractor, its Agents, Employees or sub-contractors **Company** shall be responsible for and shall indemnify and hold harmless Contractor from any claims in respect of loss or damage to the hole or well. In the event the hole is lost or damaged because of the negligence of Contractor, Contractor's sole responsibility thereafter shall be the obligation to repair such damage within the limits of Contractor's normal complement of equipment and personnel or re-drill the hole in the same well or an alternate well to the depth at which, such hole was lost at a rate equal to fifty (50) percent of the applicable operating day rate only by deploying the drilling unit and personnel provided however, that in the case of any relief well, Operator shall be solely responsible for all other costs or damage with respect to such loss or damage, regardless of the cause of such loss or damage. |

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|---|---|---|---|
| 70 | Clause 9.2<br>Page 122 | **COMPANY'S EQUIPMENT**: Contractor shall assume the risk of and shall be solely responsible for, damage to and loss or destruction of materials and equipment or supplies furnished by OIL. In case there is a loss or damage to OIL's equipment for causes attributable to contractor, the contractor shall compensate OIL. | Contractor shall assume the risk of and shall be solely responsible for, damage to and loss or destruction of materials and equipment or supplies furnished by OIL **and within Contractor's sole care, custody and control**. In case there is a loss or damage to OIL's equipment for causes attributable **solely** to contractor, the contractor shall compensate OIL. |
| 71 | Clause 9.3<br>Page 122 | **BLOWOUT OR CRATER: COST OF CONTROL OF BLOWOUT** In the event any Well being drilled hereunder shall go out of control (Blowout) due to any causes, Contractor will bear the cost and expense of killing the Well or otherwise bringing the Well under control upto US Dollar One Million for each incident and in this regard Operator shall indemnify and hold Contractor harmless in excess of US Dollar One Million for each incident. This applies only to the cost of bringing the well under control and is not to be interpreted as an assumption by Operator of any liability for injuries, to Contractor's personnel and or damage to the Drilling Unit, caused by such blowout to the Contractor, except as otherwise provided under the terms and conditions of this Agreement. | In the event any Well being drilled hereunder shall go out of control (Blowout) due to any causes, Contractor will bear the cost and expense of killing the Well or otherwise bringing the Well under control upto US Dollar One Million for each incident and in this regard **Company** shall indemnify and hold Contractor harmless in excess of US Dollar One Million for each incident. This applies only to the cost of bringing the well under control and is not to be interpreted as an assumption by **Company** of any liability for injuries, to Contractor's personnel and or damage to the Drilling Unit, caused by such blowout to the Contractor, except as otherwise provided under the terms and conditions of this Agreement. |
| 72 | Clause 9.5<br>Page 122 | **UNDERGROUND DAMAGE:** Operator agrees to indemnify and hold Contractor harmless from any and all claims against Contractor based on any incidents arising out of or occurring during the term of this Agreement on account of injury to, destruction of or loss or impairment of any property rights in or to oil, gas or other mineral substance or water if at the time of the act or omission causing such injury, destruction, loss or impairment such substances had not been reduced to physical possession above the surface of the earth, and including any loss or damage to any formation strata or reservoir beneath the surface of the earth. | **UNDERGROUND DAMAGE: Company** agrees to indemnify and hold Contractor harmless from any and all claims against Contractor based on any incidents arising out of or occurring during the term of this Agreement on account of injury to, destruction of or loss or impairment of any property rights in or to oil, gas or other mineral substance or water if at the time of the act or omission causing such injury, destruction, loss or impairment such substances had not been reduced to physical possession above the surface of the earth, and including any loss or damage to any formation strata or reservoir beneath the surface of the earth. |

<table>
<tr><td>73</td><td>Clause 11.3<br>Page 126</td><td>All imports and import clearances under the contract shall be done by the contractor and OIL shall not provide any assistance in this regard.</td><td>All imports and import clearances under the contract shall be done by the contractor <s>and OIL shall not provide any assistance in this regard.</s></td></tr>
<tr><td>74</td><td>Clause 24.0<br>Note: i<br>Page 131</td><td>In case, the rig remains idle for want of acceptable quality water, then ‘nil’ Day Rate shall be applicable for the entire period of shut-down.</td><td>In case, the rig remains idle for want of acceptable quality water (as per the following parameters), then 'nil' Day Rate shall be applicable for the entire period of shut-down.
<table>
<tr><th>Characteristics</th><th>Acceptable Limits (as per BIS, IS-10500-2012)</th></tr>
<tr><td>Odour</td><td>Agreeable</td></tr>
<tr><td>PH</td><td>6.5 to 8.5</td></tr>
<tr><td>Turbidity</td><td>5.0 NTU (Max.)</td></tr>
<tr><td>Chorides (as $Cl^-$)</td><td>250 mg/l (Max.)</td></tr>
<tr><td>Total Hardness (as $CaCO_3$)</td><td>200 mg/l (Max.)</td></tr>
<tr><td>Iron (as $Fe^{+2}$)</td><td>0.3 mg/l (Max.)</td></tr>
<tr><td>Total Dissolved Solids</td><td>500 mg/l (Max.)</td></tr>
<tr><td>Alkalinity (as $CaCO_3$)</td><td>200 mg/l (Max.)</td></tr>
<tr><td>Mineral Oil</td><td>0.5 mg/l (Max.)</td></tr>
</table></td></tr>
<tr><td>75</td><td>Clause 28<br>Page 134</td><td>Contractor shall provide all necessary fire-fighting and safety equipment as per laid down practice and as specified under OISD - STD - 189 and OMR.<br>Additionally, considering the remoteness of location additional one no. of trailer fire pump (minimum capacity 1800 LPM at 7 $kg/cm^2$) to be kept as standby and additional water tank (minimum capacity 53 kl) to be kept at site.</td><td>Contractor shall provide all necessary fire-fighting and safety equipment as per laid down practice and as specified under OISD - STD - 189 and OMR.<br><s>Additionally, considering the remoteness ..... tank (minimum capacity 53 kl) to be kept at site.</s></td></tr>
</table>

<table>
<tr><td colspan="3"><u>Part-3, Section-IV (SCHEDULE OF RATES)</u></td><td></td></tr>
<tr><td>76</td><td>Clause 3.1<br>Page 138</td><td>3.0 OPERATING DAY RATE (Per 24 Hrs. day)<br>- Any other operations with use of Contractor's tubular.</td><td>- Any other operations with use of ~~Contractor's~~ tubular.</td></tr>
<tr><td></td><td></td><td></td><td>-</td></tr>
<tr><td colspan="3"><u>Part-4 (Proforma and Annexures)</u></td><td></td></tr>
<tr><td>77</td><td>Annexure-II<br>F. Other Services & Personnel<br>Page 163</td><td>
<table>
<tr><th rowspan="2">Sl. No.</th><th rowspan="2">I T E M</th><th colspan="2">At Expense of</th><th colspan="2">Supplied by</th></tr>
<tr><th>C</th><th>O</th><th>C</th><th>O</th></tr>
<tr><td colspan="6">F. Other Services & Personnel</td></tr>
<tr><td>29</td><td>Pollution control services.</td><td>X</td><td></td><td>X</td><td></td></tr>
</table>
</td><td>Pollution control ~~services~~.</td></tr>
</table>

**APPENDIX-I**

# Annexure – 1

## REVISED EXPERIENCE & QUALIFICATION CRITERIA OF KEY PERSONNEL

**a. RIG MANAGER/RIG SUPERINTENDENT**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (8 Marks) And |
|---|---|---|---|---|---|---|---|---|
| | Class XII or SSC or HS passed | B.Sc. or Diploma in Engineering | Engineering Graduate | Upto 5 Years | 5 to 10 Years | 10 to 15 Years | 15+ Years | a. Should have worked at least 2 years as Rig Manager / Rig Superintendent.<br>b. Should be conversant with working in diesel electrical rigs/supplied rig.<br>c. Should be conversant with mud chemicals & maintenance of mud property.<br>d. Should have completed at least 3 (three) wells of minimum 5000m depth. |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

ii) **Certification / License / Health:**

a. Must possess valid well control certificate (IWCF-Supervisor Level / Level-4 / IADC WellSharp-L4) and should be conversant with well control methods to take independent decisions in case of well emergencies.
b. Should be of sound health to work in adverse weather condition in drilling well.

**b. TOOL PUSHER**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (8 Marks) And |
|---|---|---|---|---|---|---|---|---|
| | Class XII or SSC or HS passed | B.Sc. or Diploma in Engineering | Engineering Graduate | Upto 5 Years | 5 to 10 Years | 10 to 15 Years | 15+ Years | a. Should have worked at least 1 year as Tool Pusher.<br>b. Should be conversant with working in diesel electrical rigs/supplied rig.<br>c. Should be conversant with mud chemicals & maintenance of mud property.<br>d. Should have completed at least 2 (two) wells of minimum 5000m depth. |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

ii) **Certification / License / Health:**

a. Must possess valid well control certificate (IWCF-Supervisor Level / Level-4 / IADC WellSharp-L4) and should be conversant with well control methods to take independent decisions in case of well emergencies.
b. Should be of sound health to work in adverse weather condition in drilling well.

**b. TOUR PUSHER / NIGHT TOOL PUSHER**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (8 Marks) And a. Should have worked at least 1 year as Tool / Tour Pusher. b. Should be conversant with working in diesel electrical rigs/supplied rig. c. Should be conversant with mud chemicals & maintenance of mud property. d. Should have completed at least 1 (One) well of minimum 5000m depth. |
|---|---|---|---|---|---|---|---|---|
| | Class XII or SSC or HS passed | B.Sc. or Diploma in Engineering | Engineering Graduate | Upto 5 Years | 5 to 8 Years 8 | 8 to 12 Years | 12+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

ii) **Certification / License / Health:**

a. Must possess valid well control certificate (IWCF-Supervisor Level / Level-4 / IADC WellSharp-L4) and should be conversant with well control methods to take independent decisions in case of well emergencies.
b. Should be of sound health to work in adverse weather condition in drilling well.

**d. DRILLER**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (7 Marks) And a. Should have worked at least 1 year as Shift-in-charge / Driller. b. Should be conversant with working in diesel electrical rigs/supplied rig. c. Should be conversant with mud chemicals & maintenance of mud property. d. Should have completed at least 1 (One) well of minimum 4000m depth. |
|---|---|---|---|---|---|---|---|---|
| | Class XII or SSC or HS passed | B.Sc. or Diploma in Engineering | Engineering Graduate | Upto 5 Years | 5 to 10 Years | 10 to 15 Years | 15+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

ii) **Certification / License / Health:**

a. Must possess valid well control certificate (IWCF- Driller Level / Level-3) and should be conversant with well control methods to take independent decisions in case of well emergencies.
b. Should be of sound health to work in adverse weather condition in drilling well.

**e. ASSISTANT DRILLER**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (7 Marks) And a. Should have worked at least 1 year as Asst. Driller / Head-man. b. Should be conversant with working in diesel electrical rigs/supplied rig. c. Should be conversant with mud chemicals & maintenance of mud property. d. Should have completed at least 1 (One) wells of minimum 4000m depth. |
|---|---|---|---|---|---|---|---|---|
| | Class X passed | Class XII or SSC or HS passed | B.Sc. or Diploma in Engineering | 1 to 4 Years | 4 to 6 Years | 6 to 8 Years | 8+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

ii) **Certification / License / Health:**

a. Must possess valid well control certificate (IWCF- Driller Level / Level-3) and should be conversant with well control methods to take independent decisions in case of well emergencies.
b. Should be of sound health to work in adverse weather condition in drilling well.

**f. DERRICKMAN / TOPMAN**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (6 Marks) And Should have worked at least 1 year as Derrickman /Top-man. |
|---|---|---|---|---|---|---|---|---|
| | Class VIII passed | Class X passed | Class XII or SSC or HS passed | 1 to 2 Years | 2 to 5 Years | 5 to 8 Years | 8+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

ii) **Certification / License / Health:**

a. Should be of sound health to work in adverse weather condition in drilling well.

**g. ROUGHNECK / FLOOR-MAN**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (6 Marks)<br>And<br>Should have worked at least 1 year as Roughneck / Floor man / Rig man. |
|---|---|---|---|---|---|---|---|---|
| | Class – VIII passed | Class X passed | Class XII or SSC or HS passed | 1 to 2 Years | 2 to 5 Years | 5 to 8 Years | 8+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

ii) **Certification / License / Health:**

a. Should be of sound health to work in adverse weather condition in drilling well.

**h. CHIEF MECHANIC**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (8 Marks)<br>And<br>i) Should have a minimum of 3 years' work experience as Master mechanic in drilling rigs.<br>ii) Should have sufficient knowledge of operation and maintenance of Drilling rigs and its components viz. engines, rig pumps, supercharge pumps, centrifugal pumps, solid control equipment, degasser, shale shaker and all other mechanical items / engines operating in drilling rigs. |
|---|---|---|---|---|---|---|---|---|
| | Class X passed | Class XII or SSC or HS passed | B.Sc. or Diploma in Mechanical Engg. | 1 to 3 Years | 3 to 6 Years | 6 to 8 Years | 8+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

**i. ELECTRICAL ENGINEER / CHIEF ELECTRICIAN**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | Oil Field Experience on Diesel Electric (AC-SCR / AC-VFD) Drilling Rig | | | Minimum Required (5 Marks) And Should be confident in independently carrying out the fault finding analysis, rectification of fault, operation and maintenance of all the electrical items of diesel electric drilling rig including air conditioners. |
|---|---|---|---|---|---|---|
| | Diploma in Electrical Engineering | Graduate in Electrical Engineering | 3 to 5 Years | 5 to 8 Years | 8+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | |

ii) **Certification / License / Health:**

a. Must possess valid Electrical Supervisor's Certificate of Competency No 1, 2, 3, 4 & 8 (Mining Part) issued by State Licensing Board and should be conversant with Oil Mines Regulations and Electricity rules.
**Validity of Supervisor Certificate** – Must have valid supervisor certificate, allowing them to work in the state / region where they are deployed. Responsibility for ensuring adherence to these norms rests with the contractor.

b. Should be of sound health to work in adverse weather condition in drilling well.

Note: ***ITI certificate holders are not acceptable as Chief Electricians. Moreover, the Chief Electrician must be conversant with the offered AC-SCR or AC-VFD system of drilling rigs.***

**k. MECHANIC (IC) / (PUMP)**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | | Oil Field Experience on Drilling Rig | | | | Minimum Required (8 Marks) And i) Should have a working experience as Mechanic in drilling rigs. ii) Should have sufficient knowledge of operation and maintenance of Drilling / work-over rigs and its components viz. engines, rig pumps supercharge pumps, centrifugal pumps, solid control equipment, degasser, shale shaker and all other mechanical items/engines operating in drilling rigs. |
|---|---|---|---|---|---|---|---|---|
| | Class X passed | Class XII or SSC or HS passed | B.Sc. or Diploma in Mechanical Engg. | 1 to 3 Years | 3 to 6 Years | 6 to 8 Years | 8+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | |

**I. ELECTRICIAN**

i) **Qualification & Experience**:

| Personnel | Education Qualification (Compulsory) | | Oil Field Experience on Diesel Electric (AC-SCR / AC-VFD) Drilling Rig | | | Minimum Required (5 Marks) And Should be able to read circuits, communicate, detect and rectify faults. |
|---|---|---|---|---|---|---|
| | ITI (2 Yrs. Course Preferably from Govt. recognized Institute) in Electrical Discipline | Diploma in Electrical Engg. | 3 to 8 Years | 8 to 10 Years | 10+ Years | |
| **Marks** | **1** | **2** | **3** | **4** | **5** | |

ii) **Certification / License / Health:**

a. Must possess valid Electrical Work Permit 1 & 2 Certificate of competency issued by State Licensing Board.
**Validity of permits** – Must have a valid workmen permits, allowing them to work in the state / region where they are deployed. Responsibility for ensuring adherence to these norms rests with the contractor.

b. Should be of sound health to work in adverse weather condition in drilling well.

**APPENDIX-I**

**ANNEXURE – 2**

## Part-3, Section-II, (Terms of Reference / Technical Specifications)

| Clause No. / Page No. | Original Clause | Amended Clause |
|---|---|---|
| 2. A) i) (Page – 71) | Minimum 2200 m of 5-7/8" OD, 26.3 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having Double Shoulder Tool Joint (**DSTJ**) Connection (Tool Joint OD 7" & ID 4-1/4" ID) with 150XT hard banding on box ends. | Minimum 2200 m of 5-7/8" OD, 26.3 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having Double Shoulder Tool Joint (**DSTJ**) **or XT57** Connection (Tool Joint OD 7" & **ID 4" or** 4-1/4" ~~ID~~) with 150XT hard banding on box ends. |
| 2. A) ii) (Page – 71) | Minimum 5500 m of 5-1/2" OD, 24.7 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having Double Shoulder Tool Joint (**DSTJ**) Connection (Tool Joint OD 7" & ID 4" ID) with 150XT hard banding on box ends. | Minimum 5500 m of 5-1/2" OD, 24.7 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having Double Shoulder Tool Joint (**DSTJ**) **or XT57** Connection (Tool Joint OD 7" & ID 4" **or 4-1/4"** ID) with 150XT hard banding on box ends. |
| 2. A) iii) (Page – 71) | Minimum 800 m of 4" OD, 14.0 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having **XTF-39** Tool Joint Connection (Tool Joint OD 4.7/8" & ID 2.9/16" ID) with hard banding on box ends. | Minimum 800 m of 4" OD, 14.0 ppf, Grade 'S135' Drill pipes, Internal External upset in range 2 length having ~~**XTF-39**~~ **XT39** Tool Joint Connection (Tool Joint OD 4.7/8" & ID 2.9/16" ID) with hard banding on box ends. |
| 2. B) vii) (Page – 72) | Twenty-Four (24) nos. 5-1/2" OD, 3-1/4" ID, approx. 60 PPF, 30-31 ft. long having 7" OD x 3-1/4" ID Tool Joints "Spiral heavy-weight (thick wall)" drill pipes with Double Shoulder Tool Joint (**DSTJ**) box-up & pin down connection. | Twenty-Four (24) nos. 5-1/2" OD, 3-1/4" ID, approx. 60 PPF, 30-31 ft. long having 7" OD x 3-1/4" ID Tool Joints "~~Spiral~~ **Conventional** heavy-weight (thick wall)" drill pipes with Double Shoulder Tool Joint (**DSTJ**) **or XT57** box-up & pin down connection. |
| 2. B) viii) (Page – 72) | Fifty-One (51) nos. 5" OD, 3" ID, approx. 50 PPF, 30-31 ft. long, 6-5/8" OD x 3" ID Tool Joints "Spiral heavy-weight (thick wall)" drill pipes with Double Shoulder Tool Joint (**DSTJ**) box-up & pin down connection. | ~~Fifty-One (51)~~ **Thirty-Nine (39)** nos. 5" OD, 3" ID, approx. 50 PPF, 30-31 ft. long, 6-5/8" OD x 3" ID Tool Joints "~~Spiral~~ **Conventional** heavy-weight (thick wall)" drill pipes with Double Shoulder Tool Joint (**DSTJ**) **or XT50** box-up & pin down connection. |
| 2. B) ix) (Page – 72) | Twenty-One (21) nos. 4" OD, 2-9/16" ID, approx. 28 PPF, 30-31 ft. long, 4-7/8" OD x 2-9/16" ID Tool Joints "Spiral heavy-weight (thick wall)" drill pipes with **XTF39** box-up & pin down connection. | Twenty-One (21) nos. 4" OD, 2-9/16" ID, approx. 28 PPF, 30-31 ft. long, 4-7/8" OD x 2-9/16" ID Tool Joints "~~Spiral~~ **Conventional** heavy-weight (thick wall)" drill pipes with ~~**XTF-39**~~ **XT39** box-up & pin down connection. |
| 2. C) C.2 (Page – 73 & 74) | i) Two (2) Nos. of 8" OD x 6-5/8" API regular box up and 9-1/2" OD x 7-5/8" API regular pin down cross over sub. | i) Two (2) Nos. of 8" OD x 6-5/8" API regular box up and 9-1/2" OD x 7-5/8" API regular pin down cross over sub. |

| | | |
|---|---|---|
| | ii) Two (2) Nos. of 7" OD x 5-1/2" DSTJ box up and 8" OD x 6-5/8" API regular pin down cross over sub. | ii) Two (2) Nos. of 7" OD x 5-1/2" DSTJ **or XT57** box up and 8" OD x 6-5/8" API regular pin down cross over sub. |
| | iii) Four (4) Nos. of 7" OD x 5-7/8" DSTJ box up and 5-1/2" DSTJ pin down cross over sub. | iii) Four (4) Nos. of 7" OD x 5-7/8" DSTJ **or XT57** box up and 5-1/2" DSTJ **or XT57** pin down cross over sub. |
| | iv) Four (4) Nos. of 6-3/4" OD x 4-1/2" API IF box up and 7" OD x 5-1/2" DSTJ pin down cross over sub. | iv) Four (4) Nos. of 6-3/4" OD x 4-1/2" API IF box up and 7" OD x 5-1/2" DSTJ **or XT57** pin down cross over sub. |
| | v) Four (4) Nos. of 7" OD x 5-1/2" DSTJ box up and 6-3/4" OD x 4-1/2" API IF pin down cross over sub. | v) Four (4) Nos. of 7" OD x 5-1/2" DSTJ **or XT57** box up and 6-3/4" OD x 4-1/2" API IF pin down cross over sub. |
| | vi) Two (2) Nos. 6-3/4" OD cross over sub with 4-1/2" API regular box down x 4-1/2" API IF box up connections. | vi) Two (2) Nos. 6-3/4" OD cross over sub with 4-1/2" API regular box down x 4-1/2" API IF box up connections. |
| | vii) Four (4) Nos. of 7" OD x 5-1/2" DSTJ box up and 6-5/8" OD x 5" DSTJ pin down cross over sub. | vii) Four (4) Nos. of 7" OD x 5-1/2" DSTJ **or XT57** box up and 6-5/8" OD x 5" DSTJ **or XT50** pin down cross over sub. |
| | viii) Three (3) Nos. of 6-5/8" OD cross over sub with 5" DSTJ box up x 4-1/2" API IF pin down connections. | viii) ~~Three (3)~~ **Five (5)** Nos. of 6-5/8" OD cross over sub with 5" DSTJ **or XT50** box up x 4-1/2" API IF pin down connections. |
| | ix) Three (3) Nos. of 6-5/8" OD cross over sub with 4-1/2" API IF box up x 5" DSTJ pin down connections. | ix) ~~Three (3)~~ **Five (5)** Nos. of 6-5/8" OD cross over sub with 4-1/2" API IF box up x 5" DSTJ **or XT50** pin down connections. |
| | x) Two (2) Nos. of 4-7/8" OD cross over sub with 4" XTF-39 box up x 3-1/2" API IF pin down connections. | x) Two (2) Nos. of 4-7/8" OD cross over sub with 4" ~~XTF-39~~ **XT39** box up x 3-1/2" API IF pin down connections. |
| | xi) Two (2) Nos. of 6-5/8" OD x 5" DSTJ box up and 4-7/8" OD x 4" XTF-39 pin down cross over sub. | xi) Two (2) Nos. of 6-5/8" OD x 5" DSTJ **or XT50** box up and 4-7/8" OD x 4" ~~XTF-39~~ **XT39** pin down cross over sub. |
| | xii) Two (2) Nos. of 4-7/8" OD x 4" XTF-39 box up and 3-7/8" OD x 2-7/8" SLH90 pin down cross over sub. | xii) Two (2) Nos. of 4-7/8" OD x 4" ~~XTF-39~~ **XT39** box up and 3-7/8" OD x 2-7/8" SLH90 pin down cross over sub. |
| | xiii) Two (2) Nos. of 3-1/2" API IF box up and 3-1/2" API IF pin down cross over sub. | xiii) Two (2) Nos. of 3-1/2" API IF box up and 3-1/2" API IF pin down cross over sub. |
| | xiv) Two (2) Nos. of 2-3/8" API IF box up and 2-3/8" API Regular pin down cross over sub. | xiv) Two (2) Nos. of 2-3/8" API IF box up and 2-3/8" API Regular pin down cross over sub. |

| | | |
|---|---|---|
| | xv) Two (2) Nos. of 2-7/8" SLH90 box up and 2-3/8" API IF pin down cross over sub.<br>xvi) Sufficient and suitable x-over subs for connecting the tubular with top drive sub.<br>xvii) Twin pin sub of following specifications:<br>1. One (1) No. of 9-1/2" OD, 3" ID with 7-5/8" API Regular pin at both ends.<br>2. One (1) No. of 8-1/4" OD, 2-13/16" ID with 6-5/8" API Regular pin at both ends.<br>3. One (1) No. of 6-3/4" OD, 2-1/2" ID with 4-1/2" API Regular pin at one end and 4-1/2" API IF pin at other end.<br>4. One (1) No. of 4-3/4" OD, 1-1/2" ID with 3-1/2" API Regular pin at one end and 3-1/2" API IF pin at other end. | xv) Two (2) Nos. of 2-7/8" SLH90 box up and 2-3/8" API IF pin down cross over sub.<br>xvi) Sufficient and suitable x-over subs for connecting the tubular with top drive sub.<br>xvii) Twin pin sub of following specifications:<br>1. One (1) No. of 9-1/2" OD, 3" ID with 7-5/8" API Regular pin at both ends.<br>2. One (1) No. of 8-1/4" OD, 2-13/16" ID with 6-5/8" API Regular pin at both ends.<br>3. One (1) No. of 6-3/4" OD, 2-1/2" ID with 4-1/2" API Regular pin at one end and 4-1/2" API IF pin at other end.<br>4. One (1) No. of 4-3/4" OD, 1-1/2" ID with 3-1/2" API Regular pin at one end and 3-1/2" API IF pin at other end.<br>**Note: The connections (i.e. DSTJ or XT as mentioned above) of cross-over subs must match with offered tubulars specified under clause 2. A) and 2. B) respectively.** |