#### OIL INDIA LIMITED

(A GOVT. OF INDIA ENTERPRISE)
CONTRACTS DEPARTMENT, DULIAJAN
DISTRICT: DIBRUGARH (ASSAM), PIN-786602
TEL: (91) 374-2800548, FAX: (91) 374-2803549

E-mail ID: contracts@oilindia.in Website: www.oil-india.com

AMENDMENT NO. 1 DATED 20.06.2023 TO TENDER NO. CDG3605P24 FOR 'HIRING THE SERVICES OF HYDRO-FRACTURING IN THE EXISTING WELLS OF OIL INDIA LIMITED LOCATED IN OIL FIELDS OF ASSAM INCLUDING SUPPLY OF CHEMICALS AND CONSUMABLES'.

This Amendment to Tender No. **CDG3605P24** is issued to notify about the following:

- 1) Amendment to few tender clauses are stipulated vide **ENCLOSURE-I** enclosed herewith.
- OIL's response to pre-bid queries have been uploaded on OIL's e-Procurement Portal.
- The original Price Bid Format [PROFORMA-B, Annexure-B1] stands replaced with Revised Price Bid Format [Revised PROFORMA-B, Revised Annexure-B1] attached under 'Notes and Attachments' tab in OIL's e-Tender portal.
- 4) Offer for award of other group of wells (left after awarding one group to the L1 Bidder as per their preference) shall be made in accordance with concurrent application of Public Procurement Policy for MSE Order 2012 and PP(MII) Order 2017 as per Order No. F.1/4/2021-PPD dated 18.05.2023 issued by Public Procurement Division, Department of Expenditure, Ministry of Finance, Govt. of India and any subsequent amendment thereto, subject to matching their overall quoted price to that of the L1 bidder.

All other Terms and Conditions of the Tender/Bid Document will remain unchanged.

Sd/-

(Z. Das)

Sr. Officer-Contracts(G)

For Chief General Manager-Contracts

### AMENDMENTS TO CLAUSES OF TENDER NO. CDG3605P24 FOR HYDROFRACTURING OF WELLS

| S1<br>No. | Section/Clause<br>No./Page No.                               | Original Clause  | Amended Clause   |
|-----------|--|--|--|
| 2101      | 1101/1 ago 1101  | SECTION-II: SOW/   | TOR  |
| 1)        | Note to Clause<br>no. 2.7 of<br>SOW/TOR<br>Pg. no. 89 of 217 | Note:  1. The contractor should consider the following during well selection and subsequent HF design: -  Completion: 5 M/10 M well head, 2 7/8" 6.4 ppf P110 tbg, 5 ½" 20 ppf combination with N80 csg.  Unloading / Wells Activation: Using CTU+NPU for a period of maximum 15 days (continuous) will be considered.   | Note:  1. The contractor should consider the following during well selection and subsequent HF design: -  Completion: 5 M/10 M well head, 2 7/8" 6.4 ppf P110 tbg, 5 ½" 20 ppf combination with N80 csg.  Unloading / Wells Activation: Using CTU+NPU for a period of maximum 15 days (continuous) will be considered.  In a screen-out scenario, well bore cleaning shall be carried out by the bidder using their own CTU, FPU,  |
| 2)        | Clause no. 3.2 of SOW/ToR  Pg. no. 90 of 217                 | Contractor shall supply Retrievable packer of 10,000 psi differential pressure rating as per the following specs, suitable to run in vertical and deviated wells with required tools/accessories for its installation and retrieval for each of the wells to be fracked. OIL shall provide 2.7/8" OD tubing string with API 8RD EUE/VAMTOP/Hunting Seal-lock XD connection for running in of packer/final completion. Necessary cross-overs etc. | NPU etc. including consumables.  Contractor shall supply Permanent Retrievable or Retrievable Seal Bore packer of 10,000 psi differential pressure rating with required tools/accessories as given below for its installation and retrieval has to be supplied by the contractor.  a) Specification of Permanent Retrievable or Retrievable Seal Bore Packer/Fracture Packer  Suitable for setting depth of 2500-5000 m  Casing size 5-1/2 in, 20-23 ppf  Differential pressure 10000 psi (above and below)  Temp rating 250 deg F |

| S1<br>No. | Section/Clause | Original Clause  | Amended Clause  |
|-----------|----------------|--|---|
| No.       | No./Page No.   | for connecting the tool shall be under the scope of the service provider.  a) Specification of Retrievable Packer Suitable for setting depth of 5000 m Casing size: 5-1/2 in, 20-23 ppf Differential pressure: 10000 psi (above and below)  Temp rating: 250 deg F Packer element: Nitrile/HNBR/ECNER Drift dia: 2.347 in  Metallurgy: Minimum L-80  The packer shall be hydraulic set without any rotation or tubing movement with straight pick up and release mechanism. A wire-line re-entry guide shall be provided at the bottom of packer/tubing shoe.  b) Redress Kit for packer/accessories | ID (MIN) 3.00 inch, to stab locator seal assembly as mentioned below.  Metallurgy Minimum L-80  The packer shall be one trip hydraulic setting without any rotation or tubing movement. |
| 3)        | Clause no 422  | Fracturing Carrier Fluids  | Fracturing Carrier Fluids   |
| <u> </u>  | of SOW/TOR     | a) The Contractor shall supply suitable Carrying fluids (mixed with suitable brine)  | a) The Contractor shall supply suitable Carrying fluids (mixed with suitable brine/clay control chemical),  |

| SI  | Section/Clause                        | Original Clause  | Amended Clause  |
|-----|---------------------------------------|--|---|
| No. | No./Page No.                          | _  |   |
|     | Pg. no. 92 of 217                     | having capability to carry, maintain & sustain proppant concentration within reasonable range during pumping & placing of proppant at minimum rate of 20 bpm.  | having capability to carry, maintain & sustain proppant concentration within reasonable range during pumping & placing of proppant at minimum rate of 20 bpm.   |
|     |                                       | Notes: g) The fluid shall be Compatible with formation, reservoir fluids and completion brine and with common additives such as surfactant, non-emulsifier, bactericide as required.   | Notes: g) The fluid shall be Compatible with formation, reservoir fluids and completion brine and with common additives such as clay control chemical surfactant, non-emulsifier, bactericide as required.  |
| 4)  | Clause no. 4.2.3 of SOW/TOR           | Acid Stimulation (if required)  a) The contractor shall provide any acid or solvent fluids that might be required during   | Acid Stimulation (if required)  a) The contractor shall provide any acid or solvent fluids with necessary equipment that might be required  |
|     | Pg. no. 92 of 217                     | execution which may include but not limited to:  # Tubing pickle (weak 7.5% inorganic acid system)  # Clay Stabilization  b) The Contractor shall be required to provide the minimum Acid stimulation chemicals wherever required.  c) The supply of Chemicals and recipe shall be under contractor's scope. | during execution which may include but not limited to: # Tubing pickle (weak 7.5% inorganic acid system) # Clay Stabilization b) The Contractor shall be required to provide the minimum Acid stimulation chemicals wherever required. c) The supply of Chemicals and recipe shall be under contractor's scope. |
| 5)  | Clause no.                            | Proppant Blender   | Proppant Blender  |
|     | 4.2.4.1 of SOW/TOR  Pg. no. 92 of 217 | c) Dry additive system with interchangeable auger size to measure dry additive supply accurately.  | c) Dry additive system with auger size to measure dry additive supply accurately.   |
| 6)  | Clause no.<br>4.2.4.4 of<br>SOW/TOR   | <b>Fracturing Pump Unit</b> : The Contractor shall provide Fracturing pumping Unit with following specifications:  | <b>Fracturing Pump Unit</b> : The Contractor shall provide Fracturing pumping Unit with following specifications:   |

| S1  | Section/Clause     | Original Clause   | Amended Clause   |
|-----|--------------------|---|--|
| No. | No./Page No.       |   |  |
|     | Pg. no. 93 of 217  | a) Maximum 03 (Three) nos. of Fracturing Pumping unit skid mounted, or truck trailer mounted, suitable for pumping corrosive and non-corrosive fluids pumps with a total HP requirement of 6750 | a) Maximum 04 (Four) nos. of Fracturing Pumping unit skid mounted, or truck trailer mounted, suitable for pumping corrosive and non-corrosive fluids pumps with a total hydraulic HP requirement of 9,000. |
|     |                    | b) Remotely operated and equipped with emergency kill system.   | b) Remotely operated and equipped with emergency kill system.  |
|     |                    | c) Equipped with pressure limiting system to pre-set maximum pressure.  | c) Equipped with pressure limiting system to pre-set maximum pressure.   |
| 7)  | Clause no.         | Storage and Mixing Tanks  | Storage Tanks  |
|     | 4.2.4.5 of SOW/TOR | b) The tanks shall be capable of storing and mixing treated Fluids  | b) The tanks shall be capable of storing treated Fluids  |
|     | Pg. no. 93 of 217  |   |  |
| 8)  | Clause no.         | Coiled Tubing and Nitrogen Pumper unit  | Coiled Tubing, Fluid Pumping and Nitrogen Pumper   |
| •   | 4.2.4.17 of        |   | unit   |
|     | SOW/TOR            | The contractor shall carry out continuous   | The contractor shall carry out continuous  |
|     |                    | flowback operations of the well using their   | flowback/well bore cleanout operations post HF of the  |
|     | Pg. no. 95 of 217  | own CTU & NPU as per wells requirement.   | well using their own CTU, FPU & NPU as per wells   |
|     |                    | All necessary consumables, equipment,   | requirement. All necessary consumables, equipment,   |
|     |                    | fittings etc. will be under the scope of the  | fittings etc. will be under the scope of the contractor.   |
|     |                    | contractor. Evacuation of the flowback fluid will be under OIL's scope.   | Evacuation of the flowback fluid will be under OIL's scope.  |
| 9)  | Clause no. 7.3. c) | The contractor shall be required to provide   | The contractor shall be required to provide software   |
| - , | of SOW/TOR         | software simulated results for Candidate  | simulated results for Candidate Selection, Fluid   |
|     | •                  | Selection, Formation Damage, Fluid  | Selection, Pumping Schedule and Drawdown prior to  |
|     | Pg. no. 99 of 217  | Selection, Pumping Schedule, Drawdown   | execution of each job.   |
|     |                    | and Scale prediction prior to execution of  |  |
|     |                    | each job.   |  |

# 10) Clause no. 12.0 of SOW/TOR Pg. no. 101 of 217

## Criteria for successful hydrofrac job:

- 12.1 The HF job in a well shall be considered to be successful, when:
  - 12.1.1 Any post frac incremental gain of oil/gas production from the well.
  - 12.1.2 Any gain in oil/gas production in case of shut-in wells.
- 12.2 For a successful HF job, 100% of the quoted rate per HF job shall be paid. In case of unsuccessful, payment for only 50% of the quoted rate per HF job shall be made.

**Note**: The maximum time for establishing the gain shall be limited to 15 days from the start of post HF flowback operations. The HF job will be treated as unsuccessful in case of no incremental production gain/reduction in baseline production of the well. Oil/Gas Production rates shall be established upon testing at production installation/facility as per the prevailing OIL's practice (for liquid: physical measurement in test tanks and for gas: from the installed flowmeters)

## Criteria for successful hydrofrac job:

- 12.1 The HF job in a well shall be considered to be successful, when:
- 12.1.1 Any post frac incremental gain of oil/gas production from the well, 100% of the quoted rate per HF job shall be paid.
- 12.1.2 For shut-in wells or wells producing on artificial lift assistance pre-HF, to evaluate the incremental gain, the well may require recompletion with appropriate artificial lift assistance. In such scenario, only 75% of the quoted HF cost shall be processed against the job. And remaining 25% will be processed subject to post establishment of incremental gain of oil/gas from the pre-HF production at the earliest.
- 12.1.3 In case, the well was producing on artificial assistance prior to HF and starts producing oil/gas on self after the HF:
- a) The post HF production rate (oil/gas) is equal or more than the pre-HF production rate (oil/gas), it will be considered as success and 100% of the quoted rate per HF job shall be paid.
- b) The post-HF production rate (oil/gas) is less than the pre-HF production rate (oil/gas) then:
- i) 75% of the quoted rate per HF job shall be paid and OIL may deploy workover outfit for recompletion of the well with artificial lift assistance for establishing

|  | the rate at production installation /facility as nor the   |
|--|--|
|  | the rate at production installation/facility as per the prevailing OIL's practice.   |
|  | ii) If the testing rate (oil/gas) at installation/facility post artificial lift recompletion is equal or more than the original pre-HF rate (oil/gas), then the remaining 25% of the quoted rate per HF job shall be paid.   |
|  | 12.4 For a successful HF job, 100% of the quoted rate per HF job shall be paid. In case of unsuccessful, payment for only 75% of the quoted rate per HF job shall be made.   |
|  | <ul> <li>Note:</li> <li>a. Any scenario where incremental oil/gas could not be established as per above mentioned clauses (12.1 through 12.3) the HF job shall be considered unsuccessful.</li> <li>b. Oil/gas Production rates shall be established upon testing at production installation/facility as per the prevailing OIL's practice (for liquid: physical measurement in test tanks and for gas: from the installed flowmeters).</li> <li>c. Date of LOA shall be treated as the reference date for status of wells (producing/shut-in) and the same shall be provided during the Study Phase (Phase-I).</li> </ul> |

| S1  | Section/Clause                                 | Original Clause  | Amended Clause  |  |
|-----|--|--|---|--|
| No. | No./Page No.                                   | CEOMON III.  | 800   |  |
| 11) |  |  |   |  |
| 12) | of SCC<br>Pg. no. 109 of<br>217                | <b>WARRANTY &amp; REMEDY OF DEFECTS</b> : The defect liability period shall be for a period of 03 months beyond the date of completion of the hydrofracturing operation in the last well   | WARRANTY & REMEDY OF DEFECTS: The defect liability period shall be upto the final demobilization of the Hydrofracturing Equipment along with accessories post demobilization notice and after joint assessment with the OIL's Team.   |  |
| 13) | Clause no. 21.0 of SCC  Pg. no. 110-111 of 217 | PENALTY:  21.1 After the mobilization has been completed and well is handed over to the Contractor for carrying out HF job, if the Contractor fails to start the operation within 07 days' time due to any reasons attributable to the Contractor, penalty will be imposed at a rate of 0.5% of quoted price for HF job per day or part thereof of delay upto a maximum of 7.5% of individual HF job.  21.2 When Inter Location Movement (ILM) is advised by the Company, the same shall be completed by the Contractor within a period of 07 (Seven) days from the date of issuance of notice for ILM and ready to start the operation. But, in case, the Contractor fails to start the operation within 07 days' time due to any reasons attributable to the Contractor, penalty will be imposed at a rate of 0.5% of quoted price for HF job per day or part thereof of delay upto a maximum of 7.5% of individual job.  21.3 During operation, any interruption of the operation on account of | PENALTY:  21.1 Upon completion of mobilization and issuance of job advice by OIL, the contractor shall start HF job within 07(seven) days. Any failure or delay to start the HF Job within 07 (seven) days' due to any reasons attributable to the Contractor, penalty shall be applicable @ 0.5% of quoted HF cost per well against each day delay, upto a maximum 7.5% of quoted HF cost per well. This delay day(s) shall be prorated on hourly basis for penalty calculation.  21.2 Upon issuance of Inter Location Movement (ILM) notice to the contractor by OIL, the ILM shall be completed and ready to undertake the operation within 07 (Seven) days from the date of issuance of ILM notice. Any failure or delay in readiness to undertake operation within 07 (seven) days from issuance of ILM notice due to any reasons attributable to the Contractor, penalty shall be applicable @ 0.5% of quoted HF cost per well against each day delay, upto a maximum 7.5% of |  |

| S1<br>No. | Section/Clause<br>No./Page No. | Original Clause  | Amended Clause   |
|-----------|--------------------------------|--|--|
| 110.      | No./ Lago No.                  | breakdown/maintenance of Contractor's equipment shall be restored within 02 hours, failing which penalty will be imposed at a rate of 0.5% of quoted price for HF job per day or part thereof of delay upto a maximum of 7.5% of individual job.   | quoted HF cost per well. This delay day(s) shall be prorated on hourly basis for penalty calculation.  21.3 During HF operation, any interruption on account of maintenance/breakdown of Contractor's equipment shall be restored within 03(three) hours, failing which  |
|           |                                | 21.4 In case the HF operation is delayed/interrupted due to non-availability of equipment/ consumables/ personnel or any other reason attributable to the Contractor, penalty will be imposed at a rate of 0.5% of quoted price for HF job per day or part thereof of delay upto a maximum of 7.5% of individual job.  | penalty shall be applicable @ 0.5% of quoted HF cost per well against each day delay, upto a maximum 7.5% of quoted HF cost per well. This delay day(s) shall be prorated on hourly basis for penalty calculation.  21.4 In case the HF operation is delayed/interrupted due to non-availability of equipment/ consumables/ personnel or any other reason attributable to the  |
|           |                                | 21.5 The objective in general has been stated in Scope of work and it has to be followed strictly by the Contractor. In case of any discrepancy in scope of work, the decision of Company shall be final. All the materials, equipment, spare etc. to be provided by the   | Contractor, penalty shall be applicable @ 0.5% of quoted HF cost per well against each day delay, upto a maximum 7.5% of quoted HF cost per well. This delay day(s) shall be prorated on hourly basis for penalty calculation.   |
|           |                                | Contractor and the manner and speed of execution and maintenance of the operation are to be conducted to the satisfaction of the Company's Engineer/representatives. Should the rate of progress of the operations or any part of them is at any time too slow in the opinion of the Company's Engineer/representatives, to ensure the completion of the operations within the prescribed time for completion, Company's | 21.5 The objective in general has been stated in Scope of work and it has to be followed strictly by the Contractor. In case of any discrepancy in scope of work, the decision of Company shall be final. All the materials, equipment, spare etc. to be provided by the Contractor and the manner and speed of execution and maintenance of the operation are to be conducted to the satisfaction of the Company's Engineer/representatives. Should the rate of progress of the operations or any part of them is at any time too |

| S1<br>No. | Section/Clause<br>No./Page No.                    | Original Clause  | Amended Clause  |  |
|-----------|---|--|---|--|
| 110.      | No./ Lago No.                                     | engineer/representatives may so notify the Contractor in writing. The Contractor shall reply to the written notice giving details of the measures to be taken to expedite operations in time. If no satisfactory reply to Company's notice is received within a reasonable time, Company shall be free to take any action deemed suitable.   | slow in the opinion of the Company's Engineer/representatives, to ensure the completion of the operations within the prescribed time for completion, Company's engineer/representatives may so notify the Contractor in writing. The Contractor shall reply to the written notice giving details of the measures to be taken to expedite operations in time. If no satisfactory reply to Company's notice is received within a reasonable time, Company shall be free to take any action deemed suitable.   |  |
| 14)       | Clause no. 29.0 of SCC<br>Pg. no. 115 of 217      | <b>EMERGENCY</b> : The company reserves the right to-use the manpower and equipment of the Contractor in the advent of any emergency like situation leading to uncontrollable pollution.   | EMERGENCY: The company may use the manpower and equipment of the Contractor in the advent of any emergency like situation leading to uncontrollable   |  |
| 15)       | Annexure-RM                                       | Revised Annexure-RM attached below   |   |  |
| 16)       |   | SECTION-IV:  | SOR   |  |
| 17)       | Clause no. 3.0 of<br>SOR<br>Pg. no. 126 of<br>217 | Demobilization Charge: On issuance of demobilization notice or on complete demobilisation, the contractor shall demobilize the HydroFrac equipment completely from Company's premises within 15 days from the date of issuance of demobilization notice or from the date of complete demobilization.  Demobilization charges (Lump sum) for the complete set of equipment shall be applicable, after removal of all equipment, | Demobilization Charge: On issuance of demobilization notice or upon completion of Work, the contractor shall demobilize the Contractor's equipment, material and personnel completely from Company's premises within 15 days from the date of issuance of demobilization notice or completion of Work.  Demobilization charges (Lump sum) for the complete set of equipment shall be applicable, after removal of all equipment, material and personnel pertaining to contractor/its sub-contractor, from the premises of company and satisfactory off-hire survey by the |  |

| SI  | Section/Clause        | Original Clause  | Amended Clause  |
|-----|-----------------------|--|---|
| No. | No./Page No.          | material and personnel pertaining to contractor/its sub-contractor, from the premises of company and satisfactory off-hire survey by the representative of   | representative of company. However, company shall not pay demobilization charges of unit/equipment, if on completion of contract/ termination, Contractor does not remove the unit from the last well area of operation                               |
|     |                       | company. However, company shall not pay demobilization charges of unit/equipment, if on completion of contract/ termination, Contractor does not remove the unit from the last well area of operation within stipulated time.  | within stipulated time.  Total cost quoted by the bidder for De-Mobilization charges shall not be less than 2% of the total estimated contract value. If De-mobilization is quoted in deficit or less than 2% of the total quoted contract value, the |
|     |                       | Total cost quoted by the bidder for De-Mobilization charges shall not be less than 2% of the total estimated contract value. If De-mobilization is quoted in deficit or less than 2% of the total quoted contract value, the deficit amount shall be withheld from the first invoice onwards and the same will be paid at the end of the contract along with Demobilization charges. | deficit amount shall be withheld from the first invoice onwards and the same will be paid at the end of the contract along with Demobilization charges.   |
| 18) | Clause no. 5.0 of SOR | <b>5.0 Cost of Hydrofracturing Jobs:</b> The cost of Hydrofracturing job includes the  | 5.0 Cost of Hydrofracturing Jobs:  The cost of Hydrofracturing job includes the following:  |
|     | Pg. no. 126 of 217    |  | I. Design, planning and execution for the entire HydroFrac job  II. Supervision, installation of the packer along with its  |
|     |                       | II. Supervision, installation of the packer along with its retrieval if required  III. Charge of equipment & manpower  | retrieval if required  III. Charge of equipment & manpower  Note: For a successful HF job, 100% of the quoted rate per HF job shall be paid. In case of unsuccessful job,   |

| SI  | Section/Clause    | Original Clause                                     | Amended Clause  |
|-----|-------------------|---|---|
| No. | No./Page No.      | •   |   |
|     |                   | <b>Note</b> : For a successful HF job, 100% of the  | only 75% payment per HF job shall be made. In this      |
|     |                   | quoted rate per HF job shall be paid. In case       | regard, please refer SOW clause no. 12.0.               |
|     |                   | of unsuccessful job, only 50% payment per           |   |
|     |                   | HF job shall be made. In this regard please         |   |
|     |                   | refer SOW clause No. 12                             |   |
| 19) | Clause no. 8.0 of | Cost of Acidization Job (Optional):                 | Cost of Acidization Job (Optional):                     |
|     | SOR               | This will include the following:                    | This will include the following:                        |
|     |                   | <ul> <li>Entire job design and execution</li> </ul> | Entire job design and execution                         |
|     |                   | • Equipment Chemicals, Consumables etc.             | • Equipment, Chemicals, Consumables etc.                |
|     | 217               |   |   |
| 20) | Clause no. 10.0   | Well Unloading Charges post Frac:                   | Well Unloading Charges post Frac:                       |
|     | of SOR            | The contractor will have to carry out post HF       | The contractor will have to carry out post HF flowback  |
|     |                   | flowback operations using their own                 | operations using their own equipment and manpower.      |
|     |                   | equipment and manpower.                             |   |
|     | 217               |   | This includes the cost of continuous flowback/well bore |
|     |                   | This includes the cost of continuous                | cleanout operations post HF using their own CTU, NPU,   |
|     |                   | flowback operations post HF using their own         | FPU, etc. as per wells requirement. All necessary       |
|     |                   | CTU, NPU, etc as per wells requirement. All         | consumables, equipment, fittings etc. will be under the |
|     |                   | necessary consumables, equipment, fittings          | scope of the contractor.                                |
|     |                   | etc. will be under the scope of the contractor.     |   |
|     |                   |   | The maximum allowable time for continuous unloading     |
|     |                   | The potential gain in rate has to be                | shall be limited to 15 days only post completion of     |
|     |                   | established within 15 well activation days          | Hydrofrac job.  |
|     |                   | post completion of Hydrofrac job.                   |   |

| NO DESCRIPTION |  | RESPONSIBILITY |            |
|----------------|--|----------------|------------|
| NO             | DESCRIPTION  | COMPANY        | CONTRACTOR |
| 1              | Project General  |                |            |
| 1.01           | Preparation of Location and Access Roads                         | X              |            |
| 1.02           | License and Permits to access location                           | X              |            |
|                | Provision of Drilling/ workover rig                              |                |            |
| 1.03           | services including operating manpower,                           | X              |            |
|                | site office  |                |            |
|                | Provision of : Tubular (Tubing-                                  |                |            |
| 1.04           | Completion), and Well Head                                       | X              |            |
|                | Equipment(Excluding Tress Saver)                                 |                |            |
| 1.05           | Suggestion for Well Completion Plan                              |                | X          |
| 1.06           | Approval of well completion plan                                 | X              |            |
|                | Supply & Installation (with                                      |                |            |
|                | CONTRACTOR rig & rig crew) of <b>Packer</b> ,                    |                |            |
| 1.07 (a)       | assembling, R/I instructions, settings,                          |                | x          |
| 1.0. (α)       | redressing, milling, retrieval instructions                      |                |            |
|                | (if required) including trained manpower                         |                |            |
|                | and tools for setting and retrieval                              |                |            |
| 1 07(1-)       | Providing equipment, chemicals and                               |                | v          |
| 1.07(b)        | services for acid, solvent, scale removal                        |                | X          |
|                | jobs (if required)  Provision for Wire line Services for logging |                |            |
| 1.08           | and Perforation.   | X              |            |
|                | Provision of raw operational Water for                           |                |            |
| 1.09           | fracturing   |                | X          |
|                | All frac equipment, execution and                                |                |            |
| 1.09           | supervision of frac job including                                |                | X          |
|                | manpower   |                |            |
| 1.10           | T1 1 1 0 4 1 1 1   |                |            |
| 1.10           | Flow back & continuous unloading                                 |                | X          |
| 1.11           | Flowback plan  |                | х          |
| 1.10           | Provision for NPU, FPU and CTU                                   |                |            |
| 1.12           | operations including operating manpower                          |                | X          |
|                | Provision of Contractored Tubing                                 |                |            |
| 1.13           | including operating manpower                                     | X              |            |
|                | Supply of Proppant and all Fracturing                            |                |            |
| 1.14           | Chemicals,   |                | X          |
|                | Mobilization & installation of Tree Saver /                      |                |            |
| 1.15           | Wellhead Isolation Tool including trained                        |                | X          |
|                | manpower   |                |            |
| 1.16           | Pre Hydro Frac Operation Well Control                            | х              |            |
| 1.10           | Liability  | 42             |            |
| 1.17           | Environmental / Clean Up Liability                               |                | x          |
|                | (Disposal upto pit at wellsite)                                  |                |            |
| 2              | Preparation of Fracturing Program                                |                |            |

| R     | Responsibility Matrix – Hydraulic Fracturing of 10 Nos of Oil/Gas Wells                  |                |            |  |  |
|-------|--|----------------|------------|--|--|
| NO    | DESCRIPTION  | RESPONSIBILITY |            |  |  |
| NO    | DESCRIPTION  | COMPANY        | CONTRACTOR |  |  |
| 1     | Project General  |                |            |  |  |
| 2.1   | Review of Existing Data  |                | X          |  |  |
| 2.1.1 | Providing Production and Completion Data   | X              |            |  |  |
| 2.1.2 | Providing Existing Open Hole and Cased<br>Hole Log Data                                  | X              |            |  |  |
| 2.1.3 | Well Test Data   | X              |            |  |  |
| 2.1.4 | Interpretation of the data   |                | X          |  |  |
| 2.1.5 | Providing Core and fluid samples for lab test as per availability                        | x              |            |  |  |
| 2.1.6 | Laboratory tests as required   |                | x          |  |  |
| 2.2   | Preparation of Hydrofrac program   |                | x          |  |  |
| 2.3   | Approval of Hydrofrac Program  | X              |            |  |  |
| 3     | Operations   |                |            |  |  |
| 3.1   | Security of the Contractors equipment at the well site                                   |                | х          |  |  |
| 3.2   | Medivac, if any by Road  |                | X          |  |  |
| 3.3   | Firefighting facilities at the site  | X              |            |  |  |
| 3.4   | Disposal pit at Well Site  | X              |            |  |  |
| 3.5   | Trucks & Crane with trained manpower   |                | X          |  |  |
| 3.6   | Adequate Lighting for Operation  |                | X          |  |  |
| 3.7   | Waste transportation and Disposal upto   |                | Х          |  |  |
| 3.8   | Provision for Diesel Supply at the site for frac jobs and contractor's equipment / units |                | х          |  |  |
| 3.9   | Storage of chemicals and proppant  |                | X          |  |  |
| 3.10  | Camp : Accommodation and Catering for all Contractor personnel                           |                | х          |  |  |
| 3.11  | Mobilization of the Contractor Personnel to the Rig / wellsite                           |                | х          |  |  |
| 3.12  | Infield Transportation of Contractor<br>Personnel  |                | х          |  |  |
| 3.13  | Infield Transportation - Contractors Equipment and materials                             |                | x          |  |  |