TERMS OF REFERENCE (TOR)

FOR

HIRING OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION, THRU TUBING & ASSOCIATED SERVICES



TENDER ENQUIRY # PROC-SERVICES/CB/PROD-4431/2019

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TERMS OF REFERENCE / SCOPE OF WORK

1. SCOPE OF WORK:

<u>GROUP 'A": PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION,</u> <u>THRU TUBING & ASSOCIATED SERVICES FOR PUNJAB AND KPK:</u>

Coil tubing, Nitrogen Pumping, Nitrogen, Stimulation, Thru tubing & associated services for OGDCL wells/Fields/Plants located in province of Punjab and KPK on rate running and call out basis over a period of three (03) years for estimated 100 number of wells.

<u>GROUP "B": PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION,</u> <u>THRU TUBING & ASSOCIATED SERVICES FOR SINDH & BALOCHISTAN:</u>

Coil tubing, Nitrogen Pumping, Nitrogen, Stimulation, Thru tubing & associated services for OGDCL Wells/Fields/Plants located in province of Sindh and Baluchistan on rate running and call out basis over a period of three (03) years for estimated 100 number of wells.

<u>GROUP "C": PROVISION OF SMART/E-COIL AND EXPANDABLE BRIDGE PLUG SERVICES FOR</u> <u>ALL OVER PAKISTAN:</u>

Acquiring Smart/E-coil and Expandable Bridge plug services for OGDCL Wells Located all over Pakistan on rate running and call out basis over a period of three (03) years for estimated 15 number of wells.

2. <u>CRITERIA FOR PARTICIPATING IN BIDDING PROCESS:</u>

2.1 <u>GROUP "A": PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION, THRU</u> <u>TUBING & ASSOCIATED SERVICES FOR PUNJAB AND KPK.</u>

To meet the equipment and crew requirement set forth in the Technical Evaluation criteria for Group "A" (Punjab and KPK).

2.2 <u>GROUP "B": PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION, THRU</u> <u>TUBING & ASSOCIATED SERVICES FOR SINDH & BALOCHISTAN:</u>

To meet the equipment and crew requirement set forth in the Technical Evaluation criteria for Group "B" (Sindh and Baluchistan).

2.3 <u>GROUP "C": PROVISION OF SMART/E-COIL AND EXPANDABLE BRIDGE PLUG SERVICES FOR ALL</u> <u>OVER PAKISTAN:</u>

To meet the equipment and crew requirement set forth in the Technical Evaluation criteria for Group "C" (All over Pakistan).

2.4 <u>GROUP "A": PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION, THRU</u> <u>TUBING & ASSOCIATED SERVICES FOR PUNJAB & KPK AND GROUP "C": PROVISION OF SMART/E-</u> <u>COIL AND EXPANDABLE BRIDGE PLUG SERVICES for All OVER PAKISTAN:</u>

To meet the equipment and crew requirement set forth in the Technical Evaluation criteria for Group "A" (Punjab and KPK) Plus Group "C" (All over Pakistan).

2.5 <u>GROUP "B": PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION, THRU</u> <u>TUBING & ASSOCIATED SERVICES FOR SINDH AND BALUCHISTAN & GROUP "C": PROVISION OF</u> <u>SMART/E-COIL AND EXPANDABLE BRIDGE PLUG SERVICES FOR ALL OVER PAKISTAN:</u> To meet the equipment and crew requirement set forth in the Technical Evaluation criteria for Group "B" (Sindh and Baluchistan) Plus Group "C" (All over Pakistan).

- 2.6 <u>GROUP "A"(PUNJAB & KPK) & GROUP B (SINDH & BALOCHISTAN): PROVISION OF COIL TUBING,</u> <u>NITROGEN PUMPING, NITROGEN, STIMULATION, THRU TUBING & ASSOCIATED SERVICES</u> To meet the equipment and crew requirement set forth in the Technical Evaluation criteria for Group "A" (Punjab and KPK) Plus Group "B" (Sindh and Baluchistan).
- 2.7 <u>GROUP "A" (PUNJAB & KPK) & GROUP B (SINDH & BALOCHISTAN): PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION, THRU TUBING & ASSOCIATED SERVICES AND GROUP "C": SMART/E-COIL AND EXPANDABLE BRIDGE PLUG SERVICES FOR All OVER PAKISTAN):</u> To meet the equipment and crew requirement set forth in the Technical Evaluation criteria for Group "A" (Punjab and KPK) Plus Group "B" (Sindh and Baluchistan) Plus Group "C" (All over Pakistan).

3. General Terms and Conditions for All Groups:

- 3.1 Bidders quoting for multiple groups have to submit single technical bid clearly mentioning on front page the groups for which the bid is being submitted, however financial proposal to be submitted separately for each group. Combined financial bids for multiple groups will not be accepted.
- 3.2 The bidders will be evaluated separately for each Group. Contract will be awarded to lowest evaluated bidder separately for each group.
- 3.3 All certificates, documents, proof of work etc. should be in English language; if not then they shall be accompanied with certified translation to English language to be considered for evaluation.
- 3.4 The bidder participating against any group shall arrange all services for that specific group as per criteria mentioned below in technical section for each group. Failing to do so, the contract will be terminated and corresponding Bank Guarantee will be confiscated.
- 3.5 All QHSE responsibility shall rest with the contractor for any third party equipment and personnel supplied by the contractor.
- 3.6 All the equipment should be in good working condition for the performance of the services, provide calibration certification and third party inspection certificates.
- 3.7 If some tools are not available in Pakistan, then bidder have to shift the same to Pakistan within 45 Days after signing of contract. OGDCL shall not be liable to pay mobilization/demobilization charges, of any tools/equipment for bringing them to Pakistan that may be located elsewhere.
- 3.8 Contractor will provide Check List of Equipment, Tools and other accessories before mobilizing to wellsite.
- 3.9 HSE / Safety related equipment should be available with Coil tubing unit.
- 3.10 Bidder to arrange all safety equipment/services at their own for their personnel's whichever is required by them for working in extreme H₂S environment with no additional cost to OGDCL.
- 3.11 Adequate back-up services / equipment should be available on well site. However, OGDCL will not pay for backup equipment.

- 3.12 Company shall not be liable to pay for any leftover chemicals. Handling of all chemicals before and after the job will be the responsibility of the contractor.
- 3.13 All technical details for items specified in Section "Technical Evaluation Criteria" must be covered in the Technical Bid.
- 3.14 Contractor to provide Standard Price List for Material, Equipment, consumables and tools required for the performance of the Work. The same will be used as reference for obtaining additional approvals when required. No terms and conditions specified in contractor price list will be applicable unless agreed by the company.
- 3.15 Company reserves the right to procure or hire and Contractor hereby agrees to provide any of the Material, Equipment, consumables, tools listed in the attached standard price list during the entire duration of the Contract.
- 3.16 The terms and conditions, if any, in the standard price list are to be superseded by the Contract terms and conditions.
- 3.17 Redress kits for all critical items should be provided.
- 3.18 The Equipment and crew have to work round the clock as per operational activities.
- 3.19 Bidders to attach unpriced financial bids in their technical bids.
- 3.20 Bidder to submit their technical bids in Hard as well as in soft form.
- 3.21 Stimulation job is performed either through bull heading or through Coil tubing.
- 3.22 All equipment must be H2S compliant.
- 3.23 Maximum notice period for each call-out is 7-10 days and transit time from company base to OGDCL location is 4 to 5 days.
- 3.24 Successful bidder will provide the same personnel mentioned in their bid to carryout jobs. In case the service company engages the personnel other than those mentioned in their bid, the educational and experience certificate must be provided before his mobilization. In case company fails to provide the necessary documentation, OGDCL reserves the right to cancel the personnel operation and stand by charges for that particular job.
- 3.25 The bidder to provide complete list of personnel to be deployed for the jobs along with detailed CV's highlighting the details of the completed jobs, level of competence of key personnel that will be involved in design, supervision and implementation, and provide necessary support during the projects.
- 3.26 The type and number of jobs performed by personnel must be clearly mentioned on CV.
- 3.27 OGDCL reserves the right to ask bidder for the replacement of any of their personnel who is / are unacceptable to OGDCL for his / their incompetence or misbehavior at Contract holder's expense.
- 3.28 If during job, it is ascertained that the service company is unable to perform / accomplish the job satisfactorily, OGDCL reserves the right to demobilize the service company.
- 3.29 Invoice for unsuccessful jobs will not be paid.
- 3.30 Bidder must quote the cost of every item of financial bid format otherwise incomplete bid will not be entertained. Bidder must strictly follow and quote prices as per financial bid format. No clause with "if & but" having financial impacts will be entertained and in such case bid will be treated as nonresponsive.
- 3.31 The format for rates (Unit Rates) and TOR will be the part of contract along with financial evaluation tables.

- 3.32 Evaluation Tables are for Evaluation purpose only, job design and acid recipes may change according to well condition.
- 3.33 The number of wells mentioned against each job model are estimated and for evaluation purpose only. Number of wells against each model may vary as per actual requirement.
- 3.34 Fuel, oil and lubricants/transport that may be required by service company for operational purpose will be charged to service company as per actual and the cost will be deducted from the invoice.
- 3.35 Rig up/Rig down and chemical mixing period before start of job will be paid as standby for both equipment and crew.
- 3.36 Lighting arrangement if required at well site is to be arranged by the bidder.
- 3.37 Daily operating charges for CTU / crew if applicable would commence from the date / time coil tubing is lowered in the well bore and would cease when coil tubing is out of hole.
- 3.38 Partial availability of crew or equipment will not attract any charges. During traveling (mobilization/de-mobilization) phase, no operating/stand-by/rental charges will be admissible and only Mob-De-Mob will be payable (if not mobilized by OGDCL).
- 3.39 Daily operating charges for Nitrogen pumper / crew if applicable would commence when the Nitrogen cool down / pumping is started and would cease when Nitrogen pumping is finished.
- 3.40 Daily operating charges for Pumping/Stimulation crew would commence when pumping is started and would cease when the job is accomplished and pumping unit is switched off.
- 3.41 Daily Operating and standby charges of equipment and crew, if applicable must remain uniform/fixed for all days of operation wherever these charges are applicable.
- 3.42 If, after mobilization / reporting at site, job is cancelled then only mobilization / demobilization charges for crew / equipment will be paid. No job cancellation charges are admissible.
- 3.43 The Standby rates of equipment and personnel must not exceed 50% of operating charges for all equipment / crew.
- 3.44 The number of days for operating and standby are for evaluation purpose only, payment will be made as per actual.
- 3.45 The Coil Tubing cumulative depth is defined as the accumulated downward movement of the Coil Tubing.
- 3.46 No mob/demob. charges for equipment and crew shall be applicable for well to well movement within the same field.
- 3.47 Mob/De-Mob charges for equipment & crew will only be applicable if transport is not provided by OGDCL and will be calculated as per OGDCL distance chart for the locations covered in the chart and as per actual for the locations which are not covered in OGDCL location distance chart.
- 3.48 Boarding / Lodging and laundry services would be provided free of cost by OGDCL to the service company crew while working in the field/Rig site.
- 3.49 During Nitrogen Kick-off job, environment would be treated as corrosive if respective recorded values of CO2 exceed 5 % and H2S exceed 10 PPM by volume. Extra charges for corrosive environment to be incorporated including adjusted additional dosage of corrosion

inhibitor and inhibitor Aid. Extra charges for chemicals to combat corrosive environment is not to be paid by OGDCL in case of corrosive environment.

- 3.50 Cost of liquid Nitrogen would be only paid for the volume shifted to Nitrogen pumper.
- 3.51 The lost in hole (LIH) will be paid by OGDCL as per following criteria subject to the condition that there is no malfunctioning of service company equipment and loss is due to abnormal well conditions.
 - ▶ 40 % of Landed cost of Equipment/tools which are less than three years old.
 - > 30% of Landed cost of Equipment/tools which are equal to or more than three years old.
- 3.52 Bidder to confirm compliance to OGDCL"s HSEQ policy.
- 3.53 Bidder must give "Clean acceptance certificate" of OGDCL terms and conditions and if exceptions are found, the bidder will withdraw all exceptions.
- 3.54 The scope of work for each group is tentative. OGDCL may increase or decrease the scope of work without any change in rates and terms & conditions.

4. **Duration of Contract:**

4.1 The duration of the contract for each group is three (03) years therefore the Bid proposal/rates should remain valid unconditionally during the period of contract. The Rate Running Contract (as and when required basis) will remain intact till the completion of jobs on wells where Service Company was mobilized for the job during the contract period, however, any extension in term of Contract will be subject to mutual consent of both the parties in writing.

5. Payment Terms:

- 5.1 The prices quoted by bidder in financial bid should be in US\$. The quoted price should be fixed/firm and are inclusive of all applicable taxes, duties and Levies etc. except Provincial Sales Tax/ICT Tax on Services which shall be paid/refunded by OGDCL at actual.
- 5.2 The payments to the Service Company will be made through cross cheque in 100% Pak Rupees, at actual, against verified invoices at official exchange rate prevalent on the date of payment.

6. Bid Bond:

6.1 For each Group, following amount of Bid Bond/Bid Security is required to be attached/provided with technical bid.

Group-A: USD 84,000/- (US Dollars Eighty-Four Thousand Only)

Group-B: USD 84,000/- (US Dollars Eighty-Four Thousand Only)

Group-C: USD 68,000/- (US Dollars Sixty-Eight Thousand Only)

6.2 Please see Master Set of Tender Document for further details.

7. <u>Bidding Method:</u>

- 7.1 Bids against this tender are invited on "Single Stage Two Envelope Bidding Procedure" through press tendering, therefore, the bidders shall submit original and copy of their Technical and one original Financial bid along with soft copies sealed in their respective envelopes.
- <u>Note:</u> The Master Set of Tender Documents for Services uploaded on OGDCL's website (<u>www.ogdcl.com</u>) is the integral part of this TOR.

TECHNICAL EVALUATION

DOCUMENTATION FOR TECHNICAL EVALUATION

Bidders are required to provide the following details along with the bid documents:

- Complete list of personnel to be deployed for the jobs as mentioned in technical evaluation criteria along with detailed CV's highlighting the details of the completed jobs, level of competence of key personnel that will be involved in design, supervision and implementation, and provide necessary support during the jobs (both primary and backup crews). Note that the defined crew members shall not be changed without the prior consent of the Company.
- 2. Details of labs, equipment and testing services available (clearly identifying the facilities available on site, within the country and outside the country) to help gather relevant information to optimize operations.
- 3. Detailed list of necessary equipment to perform the intended Coil Tubing and Stimulation jobs in a safe and efficient manner along with their pressure and temperature ratings.
- 4. Complete list and details of available backup and support services.
- 5. Third party certification of all the equipment etc. along with dates of last testing/inspection.
- 6. Provide references for clients for whom these jobs (as mentioned in technical evaluation criteria) have been performed with contact person's name, designation & details.

TECHNICAL EVALUATION CRITERIA

- 1. Only technically qualified bidder(s) will be considered for commercial evaluation.
- 2. OGDCL reserves the right to visit bidder's operational base and check inventory and verify the information provided in the bid at any stage during the evaluation of the bids.
- 3. Bidder to provide documentary evidence for each criterion where proof is demanded. Provide documents, photographs for inventory claims.
- 4. All the bidders must fulfill the requirements below to technically qualify. In case they do not fulfill any of the below mentioned technical criteria their bid will not be acceptable. All the bidders are required to submit the below tables as per the given pattern.
- 5. Availability of all equipment and crew to be required in Pakistan except thru tubing tools and Expandable Retainers/Bridge plugs.

<u>GROUP "A": PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION,</u> <u>THRU TUBING & ASSOCIATED SERVICES FOR PUNJAB & KPK PROVINCE:</u>

1. EQUIPMENT

Sr.	Description	Availability
1. COI	TUBING SERVICES	
1.1	Coil Tubing Unit/ Reel/Injector Head	
1.1.1	Availability of Minimum Two (2) Coil Tubing Units with coil sizes 1.5", 1.75" and	Yes/No
	2" and coil length 5,500 M complete with all valid certificates available in	
	Pakistan.	
1.1.2	Commitment to provide additional unit if required by OGDCL.	Yes/No
1.1.3	The Coil tubing units must be equipped with latest real time monitoring software	Yes/No
	(fatigue computation, ovality monitoring and data acquisition), with self-aligning	
	sliding Goose neck, separate Power Pack drive mechanism and Injector heads.	
1.1.4	Availability of Injector Heads with pulling capacity of 60K lbs.	Yes/No

1.1.5	Availability of Injector Heads with pulling capacity of 80K lbs.	Yes/No
1.2	Pressure Control Equipment (02 BOPS with Each Unit).	Yes/No
1.2.1	WCE Remote Control Panel (To be operated from Control Cabin)	Yes/No
1.2.2	10K Psi Rating WCE (CAT-I), Compatible to H2S Environment	Yes/No
1.2.3	10K Psi Rating WCE (CAT-II), Compatible to H2S Environment	Yes/No
1.2.4	15K Psi Rating WCE (CAT-III), Compatible to H2S Environment	Yes/No
1.3	Additional Services/Capabilities	Yes/No
1.3.1	Adapters/X-overs for Coil Tubing rig-up (List to be provided) as per operator	Yes/No
	standard tree top/Drill Pipe connections without any financial impact	
1.3.2	Availability of Thru Tubing Milling/Fishing Tools with backup for completion sizes	Yes/No
	2-3/8" to 7". Complete package (List of tools inventory to be provided)	
	(Can be arranged and made available in Pakistan within 45 Days after issuance	
	of LOI either OWN or third Party contracting)	
1.3.3	High Speed Rotating & Jetting Tools at least 02 Nos.	Yes/No
1.3.4	Data Acquisition System at least 02 Nos.	Yes/No
2.0	STIMULATION & PUMPING SERVICES	Yes/No
2.1	Pumping Units 10 K/15 K psi WP Single/Twin Pumping Unit	Yes/No
2.1.1	Minimum 03 Pumping Unit 350 Hp -500 Hp.	Yes/No
2.1.2	Hook up Piping 15,000 Psi rating for performing jobs simultaneously at 02 or	Yes/No
	more wells.	
2.2	Mixing/Tanks with hook up piping	Yes/No
2.2.1	50 bbl Batch Mixer at least 03 Nos.	Yes/No
2.2.2	100 bbl Paddle Batch Mixer at least 02 Nos.	Yes/No
2.2.3	500 bbl Storage Tanks at least 03 Nos.	Yes/No
2.2.4	250-300 bbl Storage Tanks at least 02 Nos.	Yes/No
2.2.5	Raw Acid Storage Tank at least 01 Nos.	Yes/No
2.3	Additional Services/Capabilities	Yes/No
2.3.1	Stimulation recipes supported in line with ITB	Yes/No
2.3.2	Stimulation software (STIM PT etc.)	Yes/No
3	NITROGEN PUMPING SERVICES	Yes/No
3.1	Minimum 02 Nitrogen Pumping units with hook up.	Yes/No
3.2	Minimum 02 Nos. liquid nitrogen cryogenic storage tank.	Yes/No
4	Zone-II Certification	Yes/No
4.1	At least one Coil Tubing unit, pumping and Nitrogen equipment are Zone II Certified, affirmation to certify the remaining unit within 1 month of award of LOI	Yes/No
5	Fully Operational Workshop in Pakistan with redressing facility and should have adequate backup tools.	Yes/No

2. <u>CREW</u>

Sr.	Qualification/Experience of crew members	Availability
1	CTU Engineers / Specialist (at least 2 Engineers)	Yes/No
	Graduate Engineer with minimum five (5) years of exclusive experience of	
	planning, designing and executing Coil Tubing operations along with relevant	
	training(s) and certified courses etc.	
	Must have Designed and Performed following jobs.	
	 Nitrogen Kick Off = 100 Jobs 	
	• Stimulation = 100 Jobs	

	• Thru tubing = 50 Jobs.	
	(Attach CV and Training/Certificates)	
2	Thru Tubing Engineers (at least 1 Engineer)	Yes/No
	Graduate Engineer with minimum five (5) years of exclusive experience of	
	performing thru tubing jobs with CTU along with relevant training(s) and	
	certified courses etc.	
	 Must have Designed and Performed 50 thru tubing jobs. 	
	(Attach CV and Training/Certificates)	
3	Stimulation Engineers / Specialist (at least 2 Engineers)	Yes/No
	Graduate Engineer with minimum five (5) years of exclusive experience of	
	planning, designing and executing Stimulation Jobs along with relevant	
	training(s) and certified courses etc.	
	 Must have designed and Performed following jobs Sand Stone Stimulation = 100 Jobs 	
	Lime Stone Stimulation = 100 Jobs	
	HPHT Stimulation = 20 Jobs.	
4	(Attach CV and Training/Certificates)	Yes/No
4	CTU and Stimulation Supervisor (at least 3 supervisors for each category) Technical diploma holder with minimum of Five (05) years of exclusive	165/100
	experience of planning, designing and executing Coil Tubing jobs for CTU	
	supervisor and Stimulation jobs for stimulation supervisor along with	
	relevant training(s) and certified courses etc.	
	CTU supervisors must have Performed following jobs.	
	 Nitrogen Kick Off Jobs = 100 Jobs 	
	• Stimulation Jobs = 100 Jobs	
	• Through tubing jobs = 20 Jobs.	
	Stimulation Supervisors must have Performed following jobs.	
	Sand Stone Stimulation = 100 Jobs	
	 Lime Stone Stimulation Jobs = 100 Jobs 	
	• HPHT Stimulation Jobs = 20 Jobs.	
	(Attach CV and Training/Certificates)	
5	Operator (at least 05 operators for each category)	Yes/No
	Technical diploma holder/ matric with at least Five (05) years of relevant	
	experience of executing Coil Tubing for CTU operator and Stimulation jobs	
	for stimulation operator, along with relevant certification and training	
	courses etc.	
	CTU Operators must have Performed following jobs.	
	Nitrogen Kick Off Jobs = 100 Jobs	
	Stimulation Jobs = 100 Jobs	
	• Through tubing jobs = 50 Jobs.	
	Stimulation Operators must have Performed following jobs	
	 Sand Stone Stimulation (Sand Stone) = 100 Jobs Lime Stone Stimulation Jobs = 100 Jobs 	
	Lime Stone Stimulation Jobs = 100 Jobs	
	HPHT Stimulation Jobs = 20 Jobs.	
	(Attach CV and Training/Certificates)	

3. Company Profile

Sr.	Description	Availability
1	Bidder's History (attach proof)	
1.1	Company registered in Pakistan or elsewhere for Providing Coiled Tubing and Stimulation Services. Minimum registration period = 03 Years.	Yes/No
2	Bidder's Capabilities	
2.1	Capability in terms of equipment and crew to perform job on Deep wells (+5200	Yes/No
2.1	meters) with H2S environment simultaneously on 02 OGDCL wells.	res/NO
2.2	Capability in terms of equipment and crew to provide stimulation solutions for Sandstone & Limestone.	Yes/No
2.3	Capability to handle job volumes upto 2,000 bbl	Yes/No
2.4	Providing Lab & XRD Facilities, or commitment thereof for the required Tests in	Yes/No
	Pakistan	
2.5	Placing Sand Plug, Cement Plug Thru Coil tubing.	Yes/No
2.6	Thru tubing services	Yes/No
2.7	Pumping & Handling more than 20,000 Gallons LN2 .	Yes/No
2.8	Bidder, to provide standard operating procedure (SOPs) for standard Coil Tubing, Nitrogen Kickoff, well Clean Out, thru tubing jobs along with Technical manual of Pressure Control Equipment (PCE), Coil Tubing Unit and all types of thru' tubing tools also to be provided by the bidder.	Yes/No
2.9	Bidder, to provide published Pressure Control Manual for standard Coil Tubing operations & Stimulation Services.	Yes/No
2.10	Bidder, to provide free of cost basic and advanced Coiled Tubing and Stimulation training to two (02) OGDCL Engineers every year. Share a structured training program c/w list of courses/certifications and location where training will be performed.	Yes/No

<u>GROUP "B": PROVISION OF COIL TUBING, NITROGEN PUMPING, NITROGEN, STIMULATION,</u> <u>THRU TUBING & ASSOCIATED SERVICES FOR SINDH AND BALUCHISTAN PROVINCE:</u>

1. EQUIPMENT

Sr.	Description	Availability
1. CO	L TUBING SERVICES	
1.1	Coil Tubing Unit/ Reel/Injector Head	
1.1.1	Availability of Minimum Two (2) Coil Tubing Units with coil sizes 1.5", 1.75" and	Yes/No
	2" and coil length 5,500 M complete with all valid certificates available in	
	Pakistan.	
1.1.2	Commitment to provide additional unit if required by OGDCL.	Yes/No
1.1.3	The Coil tubing units must be equipped with latest real time monitoring software	Yes/No
	(fatigue computation, ovality monitoring and data acquisition), with self-aligning	
	sliding Goose neck, separate Power Pack drive mechanism and Injector heads.	
1.1.4	Availability of Injector Heads with pulling capacity of 60K lbs.	Yes/No
1.1.5	Availability of Injector Heads with pulling capacity of 80K lbs.	Yes/No
1.2	Pressure Control Equipment (02 BOPS with Each Unit).	Yes/No
1.2.1	WCE Remote Control Panel (To be operated from Control Cabin)	Yes/No
1.2.2	10K Psi Rating WCE (CAT-I), Compatible to H2S Environment	Yes/No
1.2.3	10K Psi Rating WCE (CAT-II), Compatible to H2S Environment	Yes/No
1.2.4	15K Psi Rating WCE (CAT-III), Compatible to H2S Environment	Yes/No
1.3	Additional Services/Capabilities	Yes/No
1.3.1	Adapters/X-overs for Coil Tubing rig-up (List to be provided) as per operator	Yes/No
	standard tree top/Drill Pipe connections without any financial impact	

1.3.2	Availability of Thru Tubing Milling/Fishing Tools with backup for completion sizes	Yes/No
	2-3/8" to 7". Complete package (List of tools inventory to be provided)	
	(Can be arranged and made available in Pakistan within 45 Days after issuance	
1 2 2	of LOI either OWN or third Party contracting)	Yes/No
1.3.3	High Speed Rotating & Jetting Tools at least 02 Nos.	
1.3.4	Data Acquisition System at least 02 Nos.	Yes/No
2	STIMULATION & PUMPING SERVICES	Yes/No
2.1	Pumping Units 10 K/15 K psi WP Single/Twin Pumping Unit	Yes/No
2.1.1	Minimum 03 Pumping Unit 350 Hp -500 Hp.	Yes/No
2.1.2	Hook up Piping 15,000 Psi rating for performing jobs simultaneously at 02 or more wells.	Yes/No
2.2	Mixing/Tanks with hook up piping	Yes/No
2.2.1	50 bbl Batch Mixer at least 03 Nos.	Yes/No
2.2.2	100 bbl Paddle Batch Mixer at least 02 Nos.	Yes/No
2.2.3	500 bbl Storage Tanks at least 03 Nos.	Yes/No
2.2.4	250-300 bbl Storage Tanks at least 02 Nos.	Yes/No
2.2.5	Raw Acid Storage Tank at least 01 Nos.	Yes/No
2.3	Additional Services/Capabilities	Yes/No
2.3.1	Stimulation recipes supported in line with ITB	Yes/No
2.3.2	Stimulation software (STIM PT etc.)	Yes/No
3	NITROGEN PUMPING SERVICES	Yes/No
3.1	Minimum 02 Nitrogen Pumping units with hook up.	Yes/No
3.2	Minimum 02 Nos. liquid nitrogen cryogenic storage tank.	Yes/No
4	Zone-II Certification	Yes/No
4.1	At least one Coil Tubing unit, pumping and Nitrogen equipment are Zone II	Yes/No
	Certified, affirmation to certify the remaining unit within 1 month of award of	
	LOI	
5	Fully Operational Workshop in Pakistan with redressing facility and should have	Yes/No
	adequate backup tools.	
6	Equipment base setup in Punjab/Islamabad	Yes/No

2. <u>CREW</u>

Sr.	Qualification/Experience of crew members	Availability
1	CTU Engineers / Specialist (at least 2 Engineers)	Yes/No
	Graduate Engineer with minimum five (5) years of exclusive experience of	
	planning, designing and executing Coil Tubing operations along with relevant	
	training(s) and certified courses etc.	
	Must have Designed and Performed following jobs.	
	 Nitrogen Kick Off = 100 Jobs 	
	Stimulation = 100 Jobs	
	• Thru tubing = 50 Jobs.	
	(Attach CV and Training/Certificates)	
2	Thru Tubing Engineers (at least 1 Engineer)	Yes/No
	Graduate Engineer with minimum five (5) years of exclusive experience of	
	performing thru tubing jobs with CTU along with relevant training(s) and	
	certified courses etc.	
	 Must have Designed and Performed 50 thru tubing jobs. 	
	(Attach CV and Training/Certificates)	

3	Stimulation Engineers / Specialist (at least 2 Engineers)	Yes/No
	Graduate Engineer with minimum five (5) years of exclusive experience of	,
	planning, designing and executing Stimulation Jobs along with relevant	
	training(s) and certified courses etc.	
	Must have designed and Performed following jobs	
	 Sand Stone Stimulation = 100 Jobs 	
	Lime Stone Stimulation = 100 Jobs	
	• HPHT Stimulation = 20 Jobs.	
	(Attach CV and Training/Certificates)	
4	CTU and Stimulation Supervisor (at least 3 supervisors for each category)	Yes/No
	Technical diploma holder with minimum of Five (05) years of exclusive	
	experience of planning, designing and executing Coil Tubing jobs for CTU	
	supervisor and Stimulation jobs for stimulation supervisor along with	
	relevant training(s) and certified courses etc.	
	CTU supervisors must have Performed following jobs.	
	 Nitrogen Kick Off Jobs = 100 Jobs 	
	• Stimulation Jobs = 100 Jobs	
	• Through tubing jobs = 20 Jobs.	
	Stimulation Supervisors must have Performed following jobs.	
	 Sand Stone Stimulation = 100 Jobs 	
	 Lime Stone Stimulation Jobs = 100 Jobs 	
	• HPHT Stimulation Jobs = 20 Jobs.	
	(Attach CV and Training/Certificates)	
5	Operator (at least 05 operators for each category)	Yes/No
	Technical diploma holder/ matric with at least Five (05) years of relevant	
	experience of executing Coil Tubing for CTU operator and Stimulation jobs	
	for stimulation operator, along with relevant certification and training	
	courses etc.	
	CTU Operators must have Performed following jobs.	
	 Nitrogen Kick Off Jobs = 100 Jobs 	
	• Stimulation Jobs = 100 Jobs	
	• Through tubing jobs = 50 Jobs.	
	Stimulation Operators must have Performed following jobs	
	 Sand Stone Stimulation (Sand Stone) = 100 Jobs 	
	• Lime Stone Stimulation Jobs = 100 Jobs	
	• HPHT Stimulation Jobs = 20 Jobs.	
	(Attach CV and Training/Certificates)	
3 (company Profile	

3. Company Profile

Sr.	Description	Availability
1	Bidder's History (attach proof)	
1.1	Company registered in Pakistan or elsewhere for Providing Coiled Tubing and	Yes/No
	Stimulation Services. Minimum registration period = 03 Years.	
2	Bidder's Capabilities	Yes/No
2.1	Capability in terms of equipment and crew to perform job on Deep wells (+5200	Yes/No
	meters) with H2S environment simultaneously on 02 OGDCL wells.	
2.2	Capability in terms of equipment and crew to provide stimulation solutions for	Yes/No
	Sandstone & Limestone.	

2.3	Capability to handle job volumes upto 2,000 bbl	Yes/No
2.4	Providing Lab & XRD Facilities, or commitment thereof for the required Tests in	Yes/No
	Pakistan	
2.5	Placing Sand Plug, Cement Plug Thru Coil tubing.	Yes/No
2.6	Thru tubing services	Yes/No
2.7	Pumping & Handling more than 20,000 Gallons LN2 .	Yes/No
2.8	Bidder, to provide standard operating procedure (SOPs) for standard Coil Tubing,	Yes/No
	Nitrogen Kickoff, well Clean Out, thru tubing jobs along with Technical manual of	
	Pressure Control Equipment (PCE), Coil Tubing Unit and all types of thru' tubing	
	tools also to be provided by the bidder.	
2.9	Bidder, to provide published Pressure Control Manual for standard Coil Tubing	Yes/No
	operations & Stimulation Services.	
2.10	Bidder, to provide free of cost basic and advanced Coiled Tubing and Stimulation	Yes/No
	training to two (02) OGDCL Engineers every year. Share a structured training	
	program c/w list of courses/certifications and location where training will be	
	performed.	

GROUP C: SMART/E-COIL & EXPANDABLE BRIDGE PLUGS SERVICES ALL OVER PAKISTAN

1. EQUIPMENT

Sr.	Description	Availability
1. COII	TUBING SERVICES	
1.1	Coil Tubing Unit/ Reel/Injector Head	
1.1.1	Availability of at least One (01) Coil Tubing Unit with coil sizes 1.5", 1.75" and 2" and coil length 5,500 M complete with all valid certificates available in Pakistan.	Yes/No
1.1.2	The Coil tubing units equipped with latest real time monitoring software (fatigue computation, ovality monitoring and data acquisition), with self-aligning sliding Goose neck, separate Power Pack drive mechanism and Injector heads.	Yes/No
1.1.3	Availability of Injector Heads with pulling capacity of 60K lbs.	Yes/No
1.1.4	Availability of Injector Heads with pulling capacity of 80K lbs.	Yes/No
1.1.5	At least 01 Smart/E-Coil cable (5,500 M) with logging head	Yes/No
1.2	Pressure Control Equipment	Yes/No
1.2.1	WCE Remote Control Panel (To be operated from Control Cabin)	Yes/No
1.2.2	10K Psi Rating WCE (CAT-I), Compatible to H2S Environment	Yes/No
1.2.3	10K Psi Rating WCE (CAT-II), Compatible to H2S Environment	Yes/No
1.2.4	15K Psi Rating WCE (CAT-III), Compatible to H2S Environment	Yes/No
1.3	Additional Services/Capabilities	Yes/No
1.3.1	Adapters/X-overs for COIL TUBING rig-up (List to be provided) as per operator standard tree top/Drill Pipe connections without any financial impact	Yes/No
1.3.2	Provision of Expandable Retainers/Bridge plugs. (Commitment to Provide within 15 Days of mobilization notice at well site)	Yes/No
1.3.3	Data Acquisition System	Yes/No
2.0	PUMPING SERVICES	Yes/No
2.1	Pumping Units 10 K/15 K psi WP Single/Twin Pumping Unit	Yes/No
2.1.1	At least 01 Pumping Unit 350 Hp -500 Hp.	Yes/No
2.1.2	Hook up Piping 15,000 Psi rating for pressure testing.	Yes/No
3.0	Zone-II Certification	Yes/No
3.1	Coil Tubing unit and pumping units are Zone-II Certified.	Yes/No
4.0	Fully Operational Workshop are Equipment Base set up anywhere in Pakistan with redressing facility and should have adequate backup tools.	Yes/No

2. <u>CREW</u>

Sr.	Qualification/Experience of crew members	Availability
1	CTU Engineers / Specialist (at least 1 Engineer) Petroleum or Mechanical Engineer with min. Five (5) years of exclusive experience of planning, designing and executing Coil Tubing operations along with relevant training(s) and certified courses etc. Must have Designed and Performed 100 Coil tubing jobs. (Attach CV and Training/Certificates)	Yes/No
2	Smart/E-Coil Operator (at least 02) Technical diploma holder with minimum of Five (05) years' experience of Smart/E-coil operations. Must have designed and Performed 30 jobs with smart/E-coil. (Attach CV and Training/Certificates)	Yes/No
3	 Operator (at least 02 operators for each Category) Technical diploma holder/ matric with at least Five (05) years relevant experience of executing Coiled Tubing and Stimulation jobs, along with relevant certification and training courses etc. CTU Operator must have Performed 100 jobs with CTU. Pumping Operator must have Performed 100 Jobs with pumping equipment. (Attach CV and Training/Certificates) 	Yes/No

3. Company Profile

Sr.	Description	Availability		
1	Bidder's History (attach proof)			
1.1				
	Stimulation Services. Minimum registration period = 03 Years.			
2	Bidder's Capabilities	Yes/No		
2.1	Bidder have performed at least 10 job with Smart/E-coil on Deep wells (+5200 meters) with H2S environment.	Yes/No		
2.2	Have pumping unit with hook up connection to provide pressure testing services.	Yes/No		
2.3	Bidder, to provide standard operating procedure (SOPs) for standard Coil Tubing, Smart/E-coil jobs along with Technical manual of Pressure Control Equipment (PCE).	Yes/No		
2.4	Bidder, to provide published Pressure Control Manual for standard Coil Tubing operations.	Yes/No		

HSE for all Groups

Sr.	Description	Remarks	
1	Written and approved HSE and Quality Policy		
2	QHSE Management System in line with International Standards available to cater HSE risks. Or Management System not available however, procedures are available to fulfill minimum QHSE requirements (i.e. Risk Assessment, Environmental risks, Emergency Response Procedures waste management etc.) Note: Copies of QHSE Management System procedures to be attached.	Yes/No	
3	QHSE Responsibilities (CV's to be attached)	Yes/No	

3.1		N/ /NI		
	Dedicated QHSE person available to handle QHSE matters. Please provide Job	Yes/No		
	Responsibilities and Quality Inspection Plan identifying 3rd party certificates for			
	lifting equipment involved in job.			
3.2	QHSE Responsibilities given to Supervisor in addition to technical job	Yes/No		
	responsibilities	N = = /N = =		
4	Hazard Identification & Risk Assessment	Yes/No		
4.1	Hazard Identification & Risk Assessment / Job Hazard Analysis are conducted	Yes/No		
	before start of project and appropriate preventive measures taken to address			
	hazards. Copies of previously conducted similar assessments to be attached			
5	Environmental Aspect Impact Analysis	Yes/No		
5.1	Environmental Aspect Impact Analysis is carried out before start of job and mitigation	Yes/No		
	measures taken in account to prevent environmental damage. Copies of previously			
F 2	conducted similar assessments to be attached.			
5.2	Use of National Environmental Quality Standards (NEQS) compliant equipment	Yes/No		
	e.g. generators at site. Recent emission reports (last Two (02) years) of equipment			
6	/ vehicles through accredited environmental Lab. to be attached.	Vac/Na		
6	Equipment & Tools	Yes/No		
6.1	Maintenance records of all equipment / tools available	Yes/No		
6.2	Third party validity certificates of equipment / tools available	Yes/No		
7	Waste Management	Yes/No		
7.1	Procedures available for Environment Friendly Waste Disposal for hazardous and	Yes/No		
	non-hazardous waste available. please provide copy.	Yes/No		
7.2				
	result of its activities.			
8	Emergency Response Procedure	Yes/No		
8.1	Approved Emergency Response Plan available with responsibilities shall be			
	shared with OGDCL			
8.2	All types of required emergency handling equipment is available which include	Yes/No		
	but not limited to appropriate number of fire extinguishers, first aid boxes,			
	stretcher, SCBA, eye wash stations and multi-gas detectors. Please provide details			
	of equipment.			
0	Incident Reporting	-		
9		Yes/No		
9.1	Incident Reporting Procedure available	Yes/No		
9.1	Incident Reporting Procedure available	Yes/No		
9.1	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement.	Yes/No Yes/No		
9.1	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management	Yes/No		
9.1 9.2	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement.	Yes/No Yes/No		
9.1 9.2 10	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report	Yes/No Yes/No Yes/No		
9.1 9.2 10	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site	Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project.	Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance.	Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance. Contractor shall comply with Health & Safety Regulations Mines Act 1923, The Oil	Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11 11.1	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance. Contractor shall comply with Health & Safety Regulations Mines Act 1923, The Oil & Gas (Safety In Drilling & Production Regulations 1974)	Yes/No Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11 11.1	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance. Contractor shall comply with Health & Safety Regulations Mines Act 1923, The Oil & Gas (Safety In Drilling & Production Regulations 1974) Contractor shall comply with Environmental Protection ACT 1997 and National	Yes/No Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11.1 11.1 11.2	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance. Contractor shall comply with Health & Safety Regulations Mines Act 1923, The Oil & Gas (Safety In Drilling & Production Regulations 1974) Contractor shall comply with Environmental Protection ACT 1997 and National Environmental Quality Standards	Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11.1 11.2 12	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance. Contractor shall comply with Health & Safety Regulations Mines Act 1923, The Oil & Gas (Safety In Drilling & Production Regulations 1974) Contractor shall comply with Environmental Protection ACT 1997 and National Environmental Quality Standards QHSE Trainings	Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11.1 11.2 12	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance. Contractor shall comply with Health & Safety Regulations Mines Act 1923, The Oil & Gas (Safety In Drilling & Production Regulations 1974) Contractor shall comply with Environmental Protection ACT 1997 and National Environmental Quality Standards QHSE Trainings All staff is trained is in basic QHSE trainings i.e. Fire Fighting, First aid, H ₂ S.	Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11.1 11.2 12.1 12.2	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance. Contractor shall comply with Health & Safety Regulations Mines Act 1923, The Oil & Gas (Safety In Drilling & Production Regulations 1974) Contractor shall comply with Environmental Protection ACT 1997 and National Environmental Quality Standards QHSE Trainings All staff is trained is in basic QHSE trainings i.e. Fire Fighting, First aid, H ₂ S. Please provide details / records of the crew. Staff receives specialized QHSE trainings with respect to their jobs	Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No		
9.1 9.2 10 10.1 11.1 11.2 12 12.1	Incident Reporting Procedure available Contractor shall report all incidents and dangerous occurrences to Company's Site Representative concerned Government Authorities CIM, District Management etc. as per legal and regulatory requirement. Project QHSE Performance Report Contractor to submit Project QHSE performance report / statistics to OGDCL Site Representative at the end of project. HSE Legal / Regulatory Compliance. Contractor shall comply with Health & Safety Regulations Mines Act 1923, The Oil & Gas (Safety In Drilling & Production Regulations 1974) Contractor shall comply with Environmental Protection ACT 1997 and National Environmental Quality Standards QHSE Trainings All staff is trained is in basic QHSE trainings i.e. Fire Fighting, First aid, H ₂ S. Please provide details / records of the crew.	Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No		

14	Permit to work	Yes/No
14.2	PTW system available and strictly followed	Yes/No
15	Vehicle Management	Yes/No
15.1	Travelling Policy / Procedure available	Yes/No
15.2	Cranes, Fork lifters are third party certified. Certificates to be provided before the	Yes/No
	execution of job.	

FORMAT FOR RATES AND FINANCIAL EVALUATION

FORMAT FOR RATES FOR ALL GROUPS (ALL RATES TO BE QUOTED IN US\$):

Sr.	Description	UOM	Operating Rate	Standby Rate
•			US\$/L	
Coil	Tubing Unit	1		
1	Coil Tubing Unit with Category 1 PCE	Day		
2	Coil Tubing Unit with Category 2 PCE.	Day		
3	Coil Tubing Unit with Category 3 PCE.	Day		
4	Coil Tubing Complete crew for all Categories PCE	Day		
5	CT BHA including Connector, DFCV, Hydraulic Disconnect, knuckle	Day		
	joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.			
6	CT BHA including Connector, DFCV, Hydraulic Disconnect, knuckle	Day		
	joint, Circulating Sub, MHA , Nozzle Various Types, Weight Bars, Riser, etc. including High Pressure Jetting / Rotating Tool.			
7	CT Cumulative Depth Charges for non-Corrosive Environment.	Meter		
8	CT Cumulative Depth Charges for Corrosive Environment	Meter		
	CO2 ≥ 5 %, H2S ≥ 10 PPM.			
9	Coil Tubing Unit (Complete set up) Mob/Demob.	КМ		
10	Coil Tubing Crew (Complete Crew) Mob/Demob.	КМ		
Nitr	ogen Services			
11	Nitrogen Pumping Equipment (Includes Nitrogen unit, Nitrogen	Day		
	tank, piping and all other associated equipment)			
12	Nitrogen Pumping Crew (Complete Crew)	Day		
13	Liquid Nitrogen Supply Tanker Standby Charges	Day	N/A	
14	Liquid Nitrogen Volume Pumping Charges	Gal		
15	Liquid Nitrogen Charges	Gal		
16	Nitrogen Pumping Equipment (Complete set up) Mob/Demob	KM		
17	Nitrogen Pumping Crew (Complete crew) Mob/Demob	KM		
18	Liquid Nitrogen Supply Tanker Mob/Demob	KM		
Pum	ping and Stimulation Services	-		
19	Pumping Crew (Complete Crew)	Day		
20	Stimulation Crew (Complete Crew)	Day		
21	500 BBL Tank charges	Day		
22	250-350 BBL Tank Charges	Day		
23	Supply Truck for Acid Standby Charges	Day	N/A	
24	Trailer for Supply of Chemicals Standby Charges	Day	N/A	

		_		
25	Pumping Equipment with all accessories Standby Charges	Day	N/A	
	(This includes Self driven pumper with piping connections for			
	pressure testing and Batch treatment).			
26	Stimulation Equipment with all accessories Standby Charges	Day	N/A	
	(This includes Pumpers, Chemical Transfer Pump, Centrifugal			
	pumps, RMX/Batch Mixer/Blender, storage tanks ,Surface piping			
	etc. and all other necessary equipment which ever required)			
27	Volume Pumping Charges for Non-Corrosive Fluids using	Gal	·	
	pumping equipment			
28	Volume pumping Charges for Corrosive/abrasive fluid using	Gal		
	pumping equipment			
29	Volume pumping Charges for Non-Corrosive Fluids using	Gal		
	stimulation equipment			
30	Volume pumping Charges for Corrosive/abrasive Fluid using	Gal		
	stimulation equipment			
31	Pumping Equipment (complete set up) Mob/Demob	KM		
32	Pumping Crew (Complete crew) Mob/Demob	КМ		
33	Stimulation Equipment (Complete Set up) Mob/Demob	КМ		
34	Stimulation Crew(Complete Crew) Mob/Demob	КМ		
35	Supply Truck for Acid Mob/Demob	КМ		
36	Trailer for Supply of Chemicals Mob/Demob	КМ		
37	500 BBL Tank Mob/Demob	КМ		
38	250-350 BBL Tank Mob/Demob	КМ		

Smart/E-Coil Services:

Sr.	Description	UOM	Operating Rate	Standby Rate
			US\$/UOM	
1	Coil tubing unit with Smart/E-Coil cable and logging Head	Day		
2	Coil tubing with Smart/E-Coil cable Cumulative Depth Charges for Non-Corrosive Environment (Coil tubing +Smart/E-coil Cable)	Meter		
3	Coil tubing with Smart/E-Coil cable Cumulative Depth Charges for Corrosive Environment CO2 \geq 5 %, H2S \geq 10 PPM (Coil tubing +Smart/E-coil Cable)	Meter		
4	Coil tubing unit with Smart/E-coil cable and logging Head Mob/Demob	KM		
5	Coil tubing unit with Smart/E-coil cable and logging Head crew Mob/Demob	KM		

Expandable Retainers/ Bridge Plug:

Sr.	Description	UOM	Unit Rate	
51.	Description		Retrieved	Left in hole
1	Expandable Retainers/Bridge plugs (2-7/8" tubing to 5"-7"	Number		
	Liner/casing) on location charges			
2	Expandable Retainers/Bridge plugs (3-1/2" tubing to 5"-7"	Number		
	Liner/casing) on location charges			
3	Expandable Retainers/Bridge plugs (4-1/2" tubing to 5"-7"	Number		
	Liner/casing) on location charges			
4	Expandable Retainers/Bridge plugs (5-1/2" tubing to 5"-7"	Number		
	Liner/casing)			

Expandable Retainers/ Bridge Plug Services:

Sr.	Description	UOM	Operating Rate US\$/U	Standby Rate IOM
1	Expandable Retainers/Bridge plug crew with setting kit	Day		
2	Expandable Retainers/Bridge plug crew including setting kit Mob/Demob	KM		

Crane with Operator:

Sr.	Description	UOM	Operating Rate	Standby Rate	
			US\$/l	S/UOM	
1	40-50 ton Hydraulic Crane with operator	Day			
2	40-50 ton Hydraulic Crane with operator Mob/Demob	KM			

Acid recipes

C	Tracting Solution		Un	Unit rate (US\$/UOM)			
Sr.	Treating Solution	UOM	Upto 250 °F	Upto 350 °F	Above 350 °F		
1	15% HCl solution c/w 2,000 ppm iron control	Gal					
	with chelating agent,						
	12 hrs. inhibition time up to 350 ⁰ F						
	08 hrs. inhibition time above 350 ⁰ F						
2	7.5% HCl Solution c/w 2,000 ppm iron control	Gal					
	with chelating agent						
	12 hrs. inhibition time up to 350 ^o F						
	08 hrs. inhibition time above 350 ⁰ F						
3	Regular Mud Acid solution: (12% HCl + 3%HF)	Gal					
	c/w 2,000ppm iron control with chelating agent						
	12 hrs. inhibition time up to 350 ⁰ F						
	08 hrs. inhibition time above 350 ⁰ F						
4	10% Acetic Acid Solution c/w 2,000 ppm iron	Gal					
	control with chelating agent						
	12 hrs. inhibition time up to 350 ^o F						
	08 hrs. inhibition time above 350 ⁰ F						
5	9% Formic Acid solution c/w 2,000ppm iron	Gal					
	control with chelating agent						
	12 hrs. inhibition time up to 350 ^o F						
	08 hrs. inhibition time above 350 ⁰ F						

Chemicals:

Sr.	Product Name	Temp. Rating	Product Code	UOM	Unit rate US\$/UOM
		Upto 250 ^o F		Gal	
1	Corrosion Inhibitor	Upto 350 ⁰ F		Gal	
		Above 350 ^o F		Gal	
		Upto 250 ^o F		Gal	
2	Corrosion Inhibitor Aid	Upto 350 ^o F		Gal	
		Above 350 ^o F		Gal	
		Upto 250 ⁰ F		Gal	
3	Organic Corrosion Inhibitor	Upto 350 ⁰ F		Gal	
		Above 350 ⁰ F		Gal	
4	H2S/CO2 Inhibitor	Upto 250 ^o F		Gal	

		Upto 350 ⁰ F	Gal
		Above 350 °F	Gal
		Upto 250 ^o F	Lbs
5	Chelating/Iron Control Agent	Upto 350 ^o F	Lbs
		Above 350 ^o F	Lbs
		Upto 250 ⁰ F	Gal
6	Foaming Agent	Upto 350 ^o F	Gal
		Above 350 °F	Gal
7	Demulsifier	Upto 400 ⁰ F	Gal
8	Anti-Sludge Agent	Upto 400 ^o F	Gal
9	32% HCL Acid	Upto 400 ⁰ F	Gal
10	Citric Acid	Upto 400 ⁰ F	Gal
11	Formic Acid	Upto 400 ⁰ F	Gal
12	Acetic Acid	Upto 400 ⁰ F	Gal
13	HF Acid	Upto 400 ^o F	Gal
14	H2S Scavenger	Upto 400 ^o F	Gal
15	Alcohol	Upto 400 ⁰ F	Gal
16	Methanol	Upto 400 ^o F	Gal
17	Mutual Solvent	Upto 400 ^o F	Gal
18	Non-Damaging Clean Out Fluid (Gel)	Upto 400 ⁰ F	Gal
19	Xylene	Upto 400 ^o F	Gal
20	Surfactant	Upto 400 ^o F	Gal
21	Diverting Agent	Upto 400 ^o F	Gal
22	Gelling Agent	Upto 400 ^o F	Gal
23	Viscoelastic or equivalent diverter	Upto 400 ^o F	Gal
24	Toulene	Upto 400 ^o F	Gal
25	Ammonium Chloride	Upto 400 ^o F	Lbs
26	Potassium Chloride	Upto 400 ^o F	Lbs
27	Calcium Chloride	Upto 400 ^o F	Lbs
28	Calcium Carbonate	Upto 400 ^o F	Lbs
29	Sodium Chloride	Upto 400 ^o F	Lbs
30	Soda Ash	Upto 400 ^o F	Lbs
31	Caustic Soda	Upto 400 ^o F	Lbs
32	Acid Fiber	Upto 400 ^o F	Lbs
33	Silica Sand	Upto 400 ^o F	Lbs
34	Mesh Sand (30/60)	Upto 400 ^o F	Lbs
35	Mesh Sand (20/40)	Upto 400 ^o F	Lbs
36	HF intensifier	Upto 400 ^o F	Lbs
37	Organic Acid Intensifier	Upto 400 ^o F	Lbs

Thru Tubing Services

Sr.	Description	UOM	Operating Rate	Standby Rate
51.	Description		US\$/L	ЮМ
1	Thru Tubing Crew	Day		
2	Internal Dimple Connector	Day		
3	External Dimple Connector	Day		
4	Upto 2-1/8" Size Down hole filter	Day		
5	Upto 2-1/8" Size Thru Tubing Motor	Day		
6	Upto 2-1/8" Size Thru Tubing weight bar	Day		
7	Upto 2-1/8" Flat Bottom Mill	Day		
8	Upto 2-1/8" Tapered Mill	Day		

9	Upto 2-1/8" Junk Mill	Day	
10	Upto 2-1/8" Impact Hammer	Day	
11	Upto 2-1/8" Accelerator	Day	
12	Centralizer	Day	
13	Pull test sub	Day	
14	Surface filter	Day	
15	Debris Filter Charges	Nos.	
16	Thru Tubing Screen Filter Charges	Nos.	
17	Thru Tubing Tools Mob/Demob	KM	
18	Thru Tubing Crew Mob/Demob	KM	

Format for Standard Acid Recipes

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	Water		Gal			
3	Chelating Agent		lbs			
4	Corrosion Inhibitor		Gal			
5	Corrosion Inhibitor Aid		Gal			
6	Surfactant		Gal			
		·	Reci	pe cost(US\$)/1,	,000 Gals	
				Recipe cost(US\$)/Gal	

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	Water		Gal			
3	Chelating Agent		lbs			
4	Corrosion Inhibitor		Gal			
5	Corrosion Inhibitor Aid		Gal			
6	Surfactant		Gal			
			Recip	e cost(US\$)/1,	000 Gals	
				Recipe cost(JS\$)/Gal	

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$			
1	32% HCl		Gal						
2	Water		Gal						
3	Chelating Agent		lbs						
4	Corrosion Inhibitor		Gal						
5	Corrosion Inhibitor Aid		Gal						
6	Surfactant		Gal						
	Recipe cost(US\$)/1,000 Gals								
	Recipe cost(US\$)/Gal								

	% Acid Solution complete product concentration/1,	000 Gals of Acid re	cipe Up to 2			1
Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	Water		Gal			
3	Chelating Agent		lbs			
4	Corrosion Inhibitor		Gal			
5	Corrosion Inhibitor Aid		Gal			
5	Surfactant		Gal			
			Reci	pe cost(US\$)/:		
				Recipe cost	(US\$)/Gal	
	% Acid Solution complete product concentration/1,0				ent, 12 hrs.	. inhibition tir
Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	Water		Gal			
3	Chelating Agent		lbs			
4	Corrosion Inhibitor		Gal			
5	Corrosion Inhibitor Aid		Gal			
6	Surfactant		Gal			
6	Surfactant			e cost(US\$)/1	,000 Gals	
6	Surfactant			e cost(US\$)/1 Recipe cost(-	
7.5%	Surfactant % Acid Solution complete product concentration/1,0		Recip	Recipe cost(US\$)/Gal	inhibition tin
7.5%	% Acid Solution complete		Recip	Recipe cost(US\$)/Gal	inhibition tin Total Rate US\$
7.59 for	% Acid Solution complete product concentration/1,	000 Gals of Acid re Product	Recip	Recipe cost(vith chelating ag 350 °F Unit Rate	US\$)/Gal gent, 8 hrs.	Total Rate
7.59 for Sr.	% Acid Solution complete product concentration/1,0 Product Name	000 Gals of Acid re Product	Recip on control w cipe above 3 UOM	Recipe cost(vith chelating ag 350 °F Unit Rate	US\$)/Gal gent, 8 hrs.	Total Rate
7.59 for Sr.	 % Acid Solution complete product concentration/1, Product Name 32% HCl Water Chelating Agent 	000 Gals of Acid re Product	Recip on control w cipe above : UOM Gal	Recipe cost(vith chelating ag 350 °F Unit Rate	US\$)/Gal gent, 8 hrs.	Total Rate
7.59 for Sr. 1 2	% Acid Solution complete product concentration/1,0 Product Name 32% HCl Water	000 Gals of Acid re Product	Recip on control w cipe above a UOM Gal Gal	Recipe cost(vith chelating ag 350 °F Unit Rate	US\$)/Gal gent, 8 hrs.	Total Rate
7.59 for Sr. 1 2 3	 % Acid Solution complete product concentration/1, Product Name 32% HCl Water Chelating Agent 	000 Gals of Acid re Product	Recip on control w cipe above a UOM Gal Gal Ibs	Recipe cost(vith chelating ag 350 °F Unit Rate	US\$)/Gal gent, 8 hrs.	Total Rate
7.59 for Sr. 1 2 3 4	 % Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor 	000 Gals of Acid re Product	Recip Recipe above UOM Gal Gal Ibs Gal	Recipe cost(vith chelating ag 350 °F Unit Rate	US\$)/Gal gent, 8 hrs.	Total Rate
7.59 for Sr. 1 2 3 4 5	 % Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid 	000 Gals of Acid re Product	Recip on control w cipe above : UOM Gal Gal Ibs Gal Gal Gal Gal	Recipe cost(vith chelating ag 350 °F Unit Rate	US\$)/Gal gent, 8 hrs. Qty.	Total Rate
7.59 for Sr. 1 2 3 4 5	 % Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid 	000 Gals of Acid re Product	Recip on control w cipe above : UOM Gal Gal Ibs Gal Gal Gal Gal	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM	US\$)/Gal gent, 8 hrs. Qty. 000 Gals	Total Rate
7.59 for Sr. 1 2 3 4 5 6 Reg	% Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid Surfactant	DOO Gals of Acid re Product Code	Recip Part Control we cipe above a UOM Gal Gal Gal Gal Gal Gal Cal Cal Cal Cal Cal Cal Cal C	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(US\$)/1, Recipe cost(US\$)/1,	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating	Total Rate US\$
7.59 for Sr. 1 2 3 4 5 6 Reg	 % Acid Solution complete product concentration/1, Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid Surfactant 	DOO Gals of Acid re Product Code	Recip Part Control we cipe above a UOM Gal Gal Gal Gal Gal Gal Cal Cal Cal Cal Cal Cal Cal C	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(US\$)/1, Recipe cost(US\$)/1,	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating	Total Rate US\$
7.55 for Sr. 1 2 3 4 5 6 Reg	% Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Surfactant	D00 Gals of Acid re Product Code	Recip Part of the second seco	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(U on control with d recipe Up to 2 Unit Rate	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating 250 °F	Total Rate US\$ agent, 12 hr
7.55 for Sr. 1 2 3 4 5 6 Reg inh Sr.	% Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid Surfactant	D00 Gals of Acid re Product Code	Recip on control we cipe above a UOM Gal Gal Gal Gal Gal Gal Gal Cal Cal Cal Cal Cal Cal Cal Cal Cal C	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(U on control with d recipe Up to 2 Unit Rate	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating 250 °F	Total Rate US\$ agent, 12 hr
7.55 for Sr. 1 2 3 4 5 6 Reg inh Sr. 1	 Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid Surfactant 	D00 Gals of Acid re Product Code	Recip on control we cipe above a UOM Gal Gal Gal Gal Gal Gal Gal Cal Cal Cal Cal Cal Cal Cal Cal Cal C	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(U on control with d recipe Up to 2 Unit Rate	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating 250 °F	Total Rate US\$ agent, 12 hr
7.5% for Sr. 1 2 3 4 5 6 Reg inh Sr. 1 2	% Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Corrosion Inhibitor Aid Surfactant	D00 Gals of Acid re Product Code	Recip on control we cipe above a UOM Gal Gal Gal Gal Gal Gal Gal Cal Cal Gal Gal Cal Cal Cal Cal Cal Cal Cal C	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(U on control with d recipe Up to 2 Unit Rate	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating 250 °F	Total Rate US\$ agent, 12 hi Total Rate
7.55 for Sr. 1 2 3 4 5 6 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	% Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid Surfactant	D00 Gals of Acid re Product Code	Recip on control we cipe above is UOM Gal Gal Gal Gal Gal Gal Gal Gal Gal Gal	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(U on control with d recipe Up to 2 Unit Rate	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating 250 °F	Total Rate US\$ agent, 12 hr
7.5% for Sr. 1 2 3 4 5 6 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	 Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid Surfactant sular Mud Acid : (12% HC) ibition time for product co Product Name 32% HCl HF Intensifier Water	D00 Gals of Acid re Product Code	Recip on control we cipe above is UOM Gal Gal Gal Gal Gal Gal Gal Cal Cal Cal Cal Cal Cal Cal Cal Cal C	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(U on control with d recipe Up to 2 Unit Rate	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating 250 °F	Total Rate US\$ agent, 12 hr
7.55 for Sr. 1 2 3 4 5 6 Reg inh Sr. 1 2 3 4 5 5 4 5	 Acid Solution complete product concentration/1,0 Product Name 32% HCl Water Chelating Agent Corrosion Inhibitor Corrosion Inhibitor Aid Surfactant ular Mud Acid : (12% HCl ibition time for product complete to the state of th	D00 Gals of Acid re Product Code	Recip on control we cipe above is UOM Gal Gal Gal Gal Gal Gal Gal Gal Gal Gal	Recipe cost(rith chelating ag 350 °F Unit Rate US\$/UOM e cost(US\$)/1, Recipe cost(U on control with d recipe Up to 2 Unit Rate	US\$)/Gal gent, 8 hrs. Qty. 000 Gals US\$)/Gal n chelating 250 °F	Total Rate US\$ agent, 12 hi Total Rate

			Recip	e cost(US\$)/1, Recipe cost(l		
	ular Mud Asid - (120/ UC	. 20/ 115)	00.0000 in	• •		
	ular Mud Acid : (12% HCl bition time for product con					agent, 12 nrs
Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCI		Gal			
2	HF Intensifier		lbs			
3	Water		Gal			
4	Chelating Agent		lbs			
5	Corrosion Inhibitor		Gal			
6	Corrosion Inhibitor Aid		Gal			
7	Surfactant		Gal			
8	Mutual Solvent		Gal			
		I		e cost(US\$)/1,0	000 Gals	
				Recipe cost(L		
_	ular Mud Acid : (12% HCl + 3				ting agent,	8 hrs. inhibitic
um	e for product concentration			Unit Rate		Total Rate
Sr.	Product Name	Product Code	UOM	US\$/UOM	Qty.	US\$
1	32% HCl		Gal			
2	HF Intensifier		lbs			
3	Water		Gal			
4	Chelating Agent		lbs			
5	Corrosion Inhibitor		Gal			
6	Corrosion Inhibitor Aid		Gal			
7	Surfactant		Gal			
8	Mutual Solvent		Gal			
		Ι	Recip	e cost(US\$)/1,	000 Gals	
			•	Recipe cost(l		
	Acetic Acid complete with duct concentration/1,000 G	•••		•••	, 12 hrs. inł	nibition time fo
Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	HF Intensifier		Lbs.			
3	Acetic Acid		Gal			
4	Water		Gal			
5	Chelating Agent		lbs.			
6	Corrosion Inhibitor		Gal			
7	Corrosion Inhibitor Aid		Gal			
	Surfactant		Gal			
8						i
8	I		Rec	cipe cost(US\$)/	'1,000 Gal	S

product concentration/1,000 Gals of Acid recipe Up to 350 ^oF

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$	
1	32% HCl		Gal				
2	HF Intensifier		Lbs.				
3	Acetic Acid		Gal				
4	Water		Gal				
5	Chelating Agent		lbs.				
6	Corrosion Inhibitor		Gal				
7	Corrosion Inhibitor Aid		Gal				
8	Surfactant		Gal				
			Recipe	cost(US\$)/1,	000 Gals		
	Recipe cost(US\$)/Gal						

10% Acetic Acid complete with 2,000 ppm iron control with chelating agent, 08 hrs. inhibition time for product concentration/1,000 Gals of Acid recipe above 350 °F

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	HF Intensifier		Lbs.			
3	Acetic Acid		Gal			
4	Water		Gal			
5	Chelating Agent		lbs.			
6	Corrosion Inhibitor		Gal			
7	Corrosion Inhibitor Aid		Gal			
8	Surfactant		Gal			
			Recipe	cost(US\$)/1,	000 Gals	
				Decine cost/		

Recipe cost(US\$)/Gal

9% Formic Acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for product concentration/1,000 Gals of Acid recipe Up to 250 °F

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$		
1	32% HCl		Gal					
2	HF Intensifier		Lbs.					
3	Formic Acid		Gal					
4	Water		Gal					
5	Chelating Agent		lbs.					
6	Corrosion Inhibitor		Gal					
7	Corrosion Inhibitor Aid		Gal					
8	Surfactant		Gal					
	Recipe cost(US\$)/1,000 Gals							
	Recipe cost(US\$)/Gal							

9% Formic Acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for product concentration/1,000 Gals of Acid recipe Up to 350 °F

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	HF Intensifier		Lbs.			
3	Formic Acid		Gal			

4	Water		Gal			
5	Chelating Agent		Ibs.			
6	Corrosion Inhibitor		Gal			
7	Corrosion Inhibitor Aid		Gal			
8	Surfactant		Gal			
			Recip	e cost(US\$)/1,	000 Gals	
				Recipe cost(US\$)/Gal	
	Formic Acid complete with 2 duct concentration/1,000 G				, 08 hrs. inł	nibition time for
Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	HF Intensifier		Lbs.			
3	Formic Acid		Gal			
4	Water		Gal			
5	Chelating Agent		lbs.			
6	Corrosion Inhibitor		Gal			
7	Corrosion Inhibitor Aid		Gal			
8	Surfactant		Gal			
			Recip	e cost(US\$)/1,	000 Gals	
Recipe cost(US\$)/Gal						

FINANCIAL EVALUATION MODEL GROUP "A" (PUNJAB & KPK)

(A) N	IITROGEN KICK-OFF						
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/ UOM	Total Cost =P x Q US\$		
1.5"	/1.75" /2" CT Services (Complete setup/crew)						
1	Coil Tubing Unit using Category 1 PCE Operating Charges	3	Days				
2	Coil Tubing Unit using Category 1 PCE Standby Charges	2	Days				
3	Coil Tubing Unit using Category 2 PCE Operating Charges	3	Days				
4	Coil Tubing Unit using Category 2 PCE Standby Charges	2	Days				
5	Coil Tubing Unit using Category 3 PCE Operating Charges	3	Days				
6	Coil Tubing Unit using Category 3 PCE Standby Charges	2	Days				
7	Coil Tubing Crew Operating Charges	3	Days				
8	Coil Tubing Crew Standby Charges	2	Days				
9	Coil Tubing Cumulative Depth Charges for Non-Corrosive Environment.	5,000	Meters				
10	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days				
11	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Standby Charges	2	Days				
12	Coil Tubing Unit Mob/Demob	1,300	KM				
13	Coil Tubing Crew Mob/Demob	1,300	КМ				
Nitro	gen and pumping services(Complete Setup/Crew)						
14	Nitrogen Pumping Equipment Operating Charges	3	Days				
15	Nitrogen Pumping Equipment Standby Charges	2	Days				
16	Nitrogen Pumping Crew Operating Charges	3	Days				
17	Nitrogen Pumping Crew Standby Charges	2	Days				
18	Liquid Nitrogen volume Pumping Charges	2,700	Gals				
19	Liquid Nitrogen Charges	3,000	Gals				
20	Liquid Nitrogen Supply Tanker Standby Charges	1	Days				
21	Pumping Crew Operating Charges	3	Days				
22	Pumping Crew Standby Charges	2	Days				
23	Volume Pumping Charges for Non-Corrosive Fluids using pumping equipment	1,000	Gals				
24	Pumping Equipment Standby Charges	2	Days				
25	Nitrogen Pumping Equipment Mob/Demob	1,300	КM	1			
26	Nitrogen Pumping Crew Mob/Demob	1,300	КМ	1			
27	Pumping Equipment Mob/Demob	1,300	КМ				
28	Pumping Crew Mob/Demob	1,300	КМ				
29	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	КМ	1			
Cran	e Services inclusive of Operator						
30	40-50 ton Hydraulic Crane Operating Charges	3	Days				
31	40-50 ton Hydraulic Crane Standby Charges	2	Days				
32	Crane with operator Mob/De-mob	1,300	KM				
		,		ell (US\$)			
	Total/well (US\$) Total for Estimated 54 wells (US\$)						

(B) S1	TIMULATION(HCL SOLUTION) / NITROGEN KICK-OFF				
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/ UOM	Total Cost =P x Q US\$
1.5"/2	1.75"/2" CT Services (complete Setup/Crew)				
1	Coil Tubing Unit using Category 1 PCE Operating	3	Days		
	Charges				
2	Coil Tubing Unit using Category 1 PCE Standby Charges	2	Days		
	Coil Tubing Crew Operating Charges	3	Days		
	Coil Tubing Crew Standby Charges	2	Days		
5	Coil Tubing Cumulative Depth Charges for Non-Corrosive Environment	5,000	Meters		
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days		
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Standby Charges	2	Days		
8	Coil Tubing Unit Mob/Demob	1,300	КМ		
9	Coil Tubing Crew Mob/Demob	1,300	KM		
Nitrog	gen Services (Complete Setup/Crew)		r		
10	Nitrogen Pumping Equipment Operating Charges	3	Days		
11	Nitrogen Pumping Equipment Standby Charges	2	Days		
12	Nitrogen Pumping Crew Operating Charges	3	Days		
13	Nitrogen Pumping Crew Standby Charges	2	Days		
14	Liquid Nitrogen Pumping Volume Charges	2,700	Gal		
15	Liquid Nitrogen Charges	3,000	Gal		
16	Liquid Nitrogen Supply Tanker Standby Charges	1	Days		
17	Nitrogen Pumping Equipment Mob/Demob	1,300	КМ		
18	Nitrogen Pumping Crew Mob/Demob	1,300	КМ		
19	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	KM		
Stimu	lation Services (Complete Setup/Crew)				
20	Stimulation Crew Operating Charges	3	Days		
21	Stimulation Crew Standby Charges	2	Days		
22	Stimulation Equipment Standby Charges	2	Days		
23	Volume Pumping Charges for Non-Corrosive Fluids using stimulation equipment	10,000	Gal		
24	Volume Pumping Charges for Corrosive/Abrasive Fluid using stimulation equipment	4,000	Gal		
25	500 BBL Tank Charges	5	Days		
26	Supply Truck for Acid Standby Charges	1	Days		
27	Trailer for Supply of Chemicals Standby Charges	1	Days		
28	Stimulation Equipment Mob/Demob	1,300	KM		
29	Stimulation Crew Mob/Demob	1,300	KM		
30	500 BBLS Tank Mob/Demob	1,300	KM	1	
31	Supply Truck for Acid Mob/Demob	1,300	КМ		
	Trailer for Supply of Chemicals Mob/Demob	1,300	KM		
	stone Treatment				
33	Treating Solution: 15% HCl upto 250 ^o F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 12 hrs. inhibition time				

Total for Estimated 10 wells (US\$)					
]			Total/well (US	\$)	
49	Crane with operator Mob/Demob	1,300	KM	1	
48	40-50 ton Hydraulic Crane Standby Charges	2	Days		
47	40-50 ton Hydraulic Crane Operating Charges	3	Days		
Cran	e Services Inclusive of Operator				
46	Caustic Soda	1,000	Lbs		
45	Soda Ash	1,000	Lbs		
44	Potassium Chloride	1,000	Lbs		
43	Ammonium Chloride	1,000	Lbs		
42	Mutual Solvent	200	Gal		
41	Alcohol	500	Gal		
40	Gelling Agent	100	Gal		
39	Diverting Agent	100	Gal		
	iron control with chelating agent, 08 hrs. inhibition time				
38	Treating Solution: 7.5% HCl above 350 °F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 12 hrs. inhibition time				
37	Treating Solution: 7.5% HCl upto 350 °F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 12 hrs. inhibition time				
36	Treating Solution: 7.5% HCl upto 250 °F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 8 hrs. inhibition time	,			
35	Treating Solution: 15% HCl above 350 °F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 12 hrs. inhibition time	,			
34	Treating Solution: 15% HCl upto 350 ^o F c/w 2,000 ppm	1,000	Gal		

(C) 9	(C) SAND STONE STIMULATION (MUD ACID SOLUTION)/ KICK OFF							
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/UOM	Total Cost =P x Q US\$			
1.5"/	1.5"/1.75"/2" CT Services (complete Setup/Crew)							
1	Coil Tubing Unit using Category 3 PCE Operating Charges	3	Days					
2	Coil Tubing Unit using Category 3 PCE Standby Charges	2	Days					
3	Coil Tubing Crew Operating Charges	3	Days					
4	Coil Tubing Crew Standby Charges	2	Days					
5	CT Cumulative Depth Charges for Corrosive Environment (CO2 \ge 5 %, H2S \ge 10 PPM)	5,000	Meters					
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days					
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Standby Charges	2	Days					
8	Coil Tubing Unit Mob/Demob	1,300	KM					
9	Coil Tubing Crew Mob/Demob	1,300	KM					
Nitro	gen Services (Complete Set Up)							
10	Nitrogen Pumping Equipment Operating Charges	3	Days					
11	Nitrogen Pumping Equipment Standby Charges	2	Days					
12	Nitrogen Pumping Crew Operating Charges	3	Days					
13	Nitrogen Pumping Crew Standby Charges	2	Days					
14	Liquid Nitrogen Pumping Volume Charges	2,700	Gal					
15	Liquid Nitrogen Charges	3,000	Gal					

10 Endulo Wittingers 1 Days 11 Nitrogen Pumping Crew Mob/Demob 1,300 KM 13 Nitrogen Pumping Crew Mob/Demob 1,300 KM 14 Nitrogen Supply Tanker Mob/Demob 1,300 KM 15 Stimulation Crew Complete setup) 2 Days 2 21 Stimulation Crew Catadby Charges 2 Days 2 23 Volume Pumping Charges for Non-Corrosive Fluids using 10,000 Gal	16	Liquid Nitrogon Supply Tonker Standby Charges	1	Dave		
18 Nitrogen Pumping Crew Mob/Demob 1,300 KM 19 Liquid Nitrogen Supply Tanker Mob/Demob 1,300 KM 20 Stimulation Crew Operating Charges 3 Days	16	Liquid Nitrogen Supply Tanker Standby Charges	1 200	Days		
19 Liquid Nitrogen Supply Tanker Mob/Demob 1,300 KM Stimulation Services (Complete setup) 3 Days 1 20 Stimulation Crew Orgenting Charges 3 Days 1 21 Stimulation Equipment Standby Charges 2 Days 1 23 Volume Pumping Charges for Non-Corrosive Fluids using 10,000 Gal 1 1 24 Volume Pumping Charges for Corrosive/Abrasive Fluid 4,000 Gal 1 1 25 S00 BBL Tank Charges 5 Days 1 2 2 Stimulation Equipment 1 3 KM 1 2 2 Stimulation Equipment Mob/Demob 1,300 KM 1 1 2 3 3 5 0 3 5 0 3 5 0 3 5 0 3 5 0 0 0 5 0 0 0 5 0 8 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						
Stimulation Services (Complete setup) Image: Stimulation Crew Operating Charges 3 Days 20 Stimulation Crew Operating Charges 2 Days Image: Stimulation Equipment Standby Charges 2 Days Image: Stimulation Equipment Standby Charges 2 Days Image: Stimulation equipment 23 Volume Pumping Charges for Non-Corrosive/Abrasive Fluid 4,000 Gal Image: Stimulation equipment 24 Volume Pumping Charges for Corrosive/Abrasive Fluid 4,000 Gal Image: Stimulation equipment 25 Stimulation Equipment Mob/Demob 1,300 KM Image: Stimulation Equipment Mob/Demob 1,300 KM 27 Trailer for Supply of Chemicals Standby Charges 1 Days Image: Stimulation Equipment Mob/Demob 1,300 KM 29 Stimulation Equipment Mob/Demob 1,300 KM Image: Stimulation Equipment Mob/Demob 1,300 KM 30 S00 BBLS Tank, Mob/Demob 1,300 KM Image: Stimulation Equipment Mob/Demob 1,300 KM 31 Supply Truck for Acid Mob/Demob 1,300 KM Image: Stimulation Equipment Mob/Demob 1,300 KM 31 Supply Truck for Acid Mob/Demob 1,300 KM Image: Stimulation Equipment Mob/Demob 1,300 KM			-			
20 Stimulation Crew Operating Charges 3 Days 0 21 Stimulation Crew Standby Charges 2 Days 0 23 Stimulation Equipment Standby Charges 10,000 Gal 0 24 Volume Pumping Charges for Corrosive/Abrasive Fluid using stimulation equipment 4,000 Gal 0 25 Supply Truck for Acid Standby Charges 1 Days 0 0 26 Supply Truck for Acid Standby Charges 1 Days 0 0 27 Trailer for Supply of Chemicals Standby Charges 1 Days 0 0 28 Stimulation Crew Mob/Demob 1,300 KM 0 0 0 30 S00 BBL Tank, Mob/Demob 1,300 KM 0			1,300	KIVI		
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32 Trailer for Supply of Chemicals Mob/Demob 1,300 KM Sand Stone Treatment - 12% HCL & 3% HF Acid Image: Comparison of Compariso	30	500 BBLS Tank, Mob/Demob	1,300	КМ		
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4 Coil Tubing Crew Standby Charges 2 Days	3			Days		
	4	Coil Tubing Crew Standby Charges	2	Days		

5	CT Cumulative Depth Charges for Non Corrosive	5,000	Meters	
5	Environment	3,000	Weters	
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	3	Days	
0	joint, Circulating Sub, MHA, Nozzle Various Types, Weight	5	Days	
	Bars, Riser, etc.) Operating Charges			
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	2	Days	
,	joint, Circulating Sub, MHA, Nozzle Various Types, Weight	2	Days	
	Bars, Riser, etc.) Standby Charges			
8	Coil Tubing Unit Mob/Demob	1,300	КМ	
9	Coil Tubing Crew Mob/Demob	1,300	KM	
	gen Services (Complete Set Up)	_,	[·····	
10	Nitrogen Pumping Equipment Operating Charges	3	Days	
11	Nitrogen Pumping Equipment Standby Charges	2	Days	
		3	Days	
12	Nitrogen Pumping Crew Operating Charges		-	
13	Nitrogen Pumping Crew Standby Charges	2	Days	
14	Liquid Nitrogen Pumping Volume Charges	2,700	Gal	
15	Liquid Nitrogen Charges	3,000	Gal	
16	Liquid Nitrogen Supply Tanker Standby Charges	1	Days	
17	Nitrogen Pumping Equipment Mob/Demob	1,300	KM	
18	Nitrogen Pumping Crew Mob/Demob	1,300	KM	
19	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	KM	
	ulation Services (Complete setup)		-	
20	Stimulation Crew Operating Charges	3	Days	
21	Stimulation Crew Standby Charges	2	Days	
22	Stimulation Equipment Standby Charges	2	Days	
23	Volume Pumping Charges for Non-Corrosive Fluids using	10,000	Gal	
	stimulation equipment			
24	Volume Pumping Charges for Corrosive Fluid using	4,000	Gal	
	stimulation equipment		-	
25	500 BBL Tank Charges	3	Days	
26	Supply Truck for Acid Standby Charges	1	Days	
27	Trailer for Supply of Chemicals Standby Charges	1	Days	
28	Stimulation Equipment Mob/Demob	1,300	KM	
29	Stimulation Crew Mob/Demob	1,300	KM	
30	500 BBL Tank, Mob/Demob	1,300	KM	
31	Supply Truck for Acid , Mob/Demob	1,300	KM	
32	Trailer for Supply of Chemicals , Mob/Demob	1,300	KM	
	Stone Treatment – Organic Acid Solution	1 000		
33	10% Acetic Acid complete with 2,000 ppm iron control	1,000	Gal	
24	with chelating agent, 12 hrs. inhibition time Up to 250 °F	4 000		
34	10% Acetic Acid complete with 2,000 ppm iron control	1,000	Gal	
25	with chelating agent, 12 hrs. inhibition time Up to 350 °F	1 000	Cal	
35	10% Acetic Acid complete with 2,000 ppm iron control	1,000	Gal	
26	with chelating agent, 8 hrs. inhibition time above 350 °F	1 000	Gal	
36	9% Formic Acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time Up to 250 °F	1,000	Gal	
27		1 000	Gal	
37	9% Formic Acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time Up to 350 °F	1,000	Gdl	
38	9% Formic Acid complete with 2,000 ppm iron control	1,000	Gal	
50	with chelating agent, 8 hrs. inhibition time above $350 ^{\circ}F$	1,000	Gai	
39	Diverting Agent	100	Gal	
		100	501	

40	Mutual Solvent	500	Gal		
41	Ammonium Chloride	1,000	Lbs		
42	Potassium Chloride	1,000	Lbs		
43	Soda Ash	1,000	Lbs		
44	Caustic Soda	1,000	Lbs		
Cran	e Services Inclusive of Operator				
45	40-50 ton Hydraulic Crane Operating Charges	3	Days		
46	40-50 ton Hydraulic Crane Standby Charges	2	Days		
47	Crane with operator Mob/Demob	1,300	КМ		
	Total/well (US\$)				
Total for Estimated 10 wells (US\$)					

(E) \	WELL CLEAN OUT (XYLENE WASH) / NITROGEN KICK-O	FF			
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/UOM	Total Cost =P x Q US\$
1.5"/	(1.75"/2" CT Services (complete Setup/Crew)				
1	Coil Tubing Unit using Category 1 PCE Operating Charges	3	Days		
2	Coil Tubing Unit using Category 1 PCE Standby Charges	2	Days		
3	Coil Tubing Crew Operating Charges	3	Days		
4	Coil Tubing Crew Standby Charges	2	Days		
5	Coil Tubing Cumulative Depth Charges for Non corrosive Environment	5,000	Meters		
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days		
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Standby Charges	2	Days		
8	Coil Tubing Unit Mob/Demob	1,300	KM		
9	Coil Tubing Crew Mob/Demob	1,300	KM		
Nitro	ogen Services (Complete Set Up)				
10	Nitrogen Pumping Equipment Operating Charges	3	Days		
11	Nitrogen Pumping Equipment Standby Charges	2	Days		
12	Nitrogen Pumping Crew Operating Charges	3	Days		
13	Nitrogen Pumping Crew Standby Charges	2	Days		
14	Liquid Nitrogen Pumping Volume Charges	2,700	Gal		
15	Liquid Nitrogen Charges	3,000	Gal		
16	Liquid Nitrogen Supply Tanker Standby Charges	2	Days		
17	Nitrogen Pumping Equipment Mob/Demob	1,300	KM		
18	Nitrogen Pumping Crew Mob/Demob	1,300	KM		
19	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	KM		
Stim	ulation Services (Complete setup)				
20	Stimulation Crew Operating Charges	3	Days		
21	Stimulation Crew Standby Charges	2	Days		
22	Stimulation Equipment Standby Charges	2	Days		
23	Volume Pumping Charges for Non-Corrosive Fluids using stimulation equipment	1,000	Gal		
24	250-300 BBL Tank Charges	5	Days		
25	Trailer for Supply of Chemicals Standby Charges	1	Days		
26	Stimulation Equipment Mob/Demob	1,300	KM		

27	Stimulation Crew Mob/Demob	1,300	KM		
28	250-300 BBL Tank Mob/Demob	1,300	KM		
29	Trailer for Supply of Chemicals Mob/Demob	1,300	KM		
Xyler	ne wash chemicals				
30	Corrosion Inhibitor up to 250 ⁰ F	20	Gal		
31	Xylene	400	Gal		
Cran	e Services Inclusive of Operator				
32	40-50 ton Hydraulic Crane Operating Charges	3	Days		
33	40-50 ton Hydraulic Crane Standby Charges	2	Days		
34	Crane with operator Mob/Demob	1,300	KM		
	Total/well (US\$)				
Total for Estimated 10 wells (US\$)					

<u>(F) S</u> Sr.	SAND PLUG/ ZONAL ISOLATION Services	Qty. (Q)	UOM (U)	Unit Cost (P) Us\$/UOM	Total Cost =P x Q US\$
1.5"/	(1.75"/2" CT Services (complete Setup/Crew)				
1	Coil Tubing Unit using Category 1 PCE Operating Charges	3	Days		
2	Coil Tubing Unit using Category 1 PCE Standby Charges	2	Days		
3	Coil Tubing Crew Operating Charges	3	Days		
4	Coil Tubing Crew Standby Charges	2	Days		
5	Coil Tubing Cumulative Depth Charges for Corrosive Environment (CO2 \geq 5 %, H2S \geq 10 PPM)	5,000	Meters		
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days		
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Standby Charges	2	Days		
8	Coil Tubing Unit Mob/Demob	1,300	KM		
9	Coil Tubing Crew Mob/Demob	1,300	KM		
Stime	ulation Services (Complete setup)				
10	Stimulation Crew Operating Charges	3	Days		
11	Stimulation Crew Standby Charges	2	Days		
12	Stimulation Equipment Standby Charges	2	Days		
13	Volume Pumping Charges for Non-Corrosive Fluids using stimulation equipment	10,000	Gal		
14	Volume Pumping Charges for Corrosive/Abrasive Fluids using stimulation equipment	4,000	Gal		
15	500 BBL Tank Charges	5	Days		
16	Trailer for Supply of Chemicals Standby Charges	1	Days		
17	Stimulation Equipment Mob/Demob	1,300	KM		
18	Stimulation Crew Mob/Demob	1,300	KM		
19	500 BBL Tank Mob/Demob	1,300	KM		
20	Trailer for Supply of Chemicals Mob/Demob	1,300	KM		
Sand	Plug Chemicals				
21	Potassium Chloride	1,000	Lbs		
22	Ammonium Chloride	1,000	Lbs		
23	Silica Sand	1,000	Lbs		
24	Mesh Sand (30/60)	1,000	Lbs		

25	Mesh Sand (20/40)	1,000	Lbs			
Cran	4					
26	40-50 ton Hydraulic Crane Operating Charges	3	Days			
27	40-50 ton Hydraulic Crane Standby Charges	2	Days			
28	Crane with operator Mob/Demob	1,300	KM			
	Total/w					
Total for Estimated 03 we						

(G)	THRU TUBING CT SERVICES				
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/UOM	Total Cost =P x Q US\$
1.5"/	/1.75"/2" CT Services (complete Setup/Crew)				
1	Coil Tubing Unit using Category 2 PCE Operating Charges	3	Days		
2	Coil Tubing Unit using Category 2 PCE Standby Charges	2	Days		
3	Coil Tubing Crew Operating Charges	3	Days		
4	Coil Tubing Crew Standby Charges	2	Days		
5	Coil Tubing Cumulative Depth Charges for Non Corrosive	5,000	Meters		
	Environment	2	Davia		
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	3	Days		
	joint, Circulating Sub, MHA , Nozzle Various Types, Weight Bars, Riser, etc. including High Pressure Jetting /				
	Rotating Tool) Operating Charges				
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	2	Days		
,	joint, Circulating Sub, MHA , Nozzle Various Types,	2	Days		
	Weight Bars, Riser, etc. including High Pressure Jetting /				
	Rotating Tool) Standby Charges				
8	Coil Tubing Unit Mob/Demob	1,300	КМ		
9	Coil Tubing Crew Mob/Demob	1,300	КМ		
Thru	Tubing Services With Back Up Tools				
10	Internal Dimple Connector - Operating	2	Days		
11	Internal Dimple Connector - Stand by	1	Days		
12	External Dimple Connector - Operating	2	Days		
13	External Dimple Connector - Stand by	1	Days		
14	Upto 2-1/8" Size Down hole filter - Operating	2	Days		
15	Upto 2-1/8" Size Down hole filter -Stand By	1	Days		
16	Upto 2-1/8" Size Thru Tubing Motor - Operating	2	Days		
17	Upto 2-1/8" Size Thru Tubing Motor - Stand By	1	Days		
18	Upto 2-1/8" Size Thru Tubing weight bar - Operating	2	Days		
19	Upto 2-1/8" Thru Tubing weight bar - Standby	1	Days		
20	Upto 2-1/8" Flat Bottom Mill - Operating	2	Days		
21	Upto 2-1/8" Flat Bottom Mill - Stand By	1	Days		
22	Upto 2-1/8" Tapered Mill -Operating	2	Days		
23	Upto 2-1/8" Tapered Mill - Stand By	1	Days		
24	Upto 2-1/8" Junk Mill - Operating	2	Days		
25	Upto 2-1/8" Junk Mill - Stand By	1	Days		
26	Upto 2-1/8" Impact Hammer - Operating	2	Days		
27	Upto 2-1/8" Impact Hammer – Standby	1	Days		
28	Upto 2-1/8" Accelerator – Operating	2	Days		
29	Upto 2-1/8" Accelerator - Stand by	1	Days		
30	Centralizer - Operating	2	Days		

32 33	Pull test sub - Operating	2	-		
22		2	Days		
55	Pull test sub - Stand by	1	Days		
34	Surface filter - Operating	2	Days		
35	Surface filter - Standby	1	Days		
36	Debris Filter charges	10	Nos.		
37	Thru Tubing Screen Filter Charges	20	Nos.		
38	Thru Tubing Crew - Operating	3	Days		
39	Thru Tubing Crew - Standby	2	Days		
40	Thru Tubing Tools Mob/Demob	1,300	КМ		
41	Thru Tubing crew Mob/Demob	1,300	КМ		
Stimu	ulation Services (Complete setup)				
42	Stimulation Crew Operating Charges	3	Days		
43	Stimulation Crew Standby Charges	2	Days		
44	Stimulation Equipment Standby Charges	2	Days		
45	Volume Pumping Charges for Non-Corrosive Fluids using	10,000	Gal		
	stimulation equipment				
46	500 BBL Tank Charges	5	Days		
47	Trailer for Supply of Chemicals Standby Charges	1	Days		
48	Stimulation Equipment Mob/Demob	1,300	KM		
49	Stimulation Crew Mob/Demob	1,300	KM		
50	500 BBL Tank Mob/Demob	1,300	KM		
51	Trailer for Supply of Chemicals Mob/Demob	1,300	KM		
Clear	n Out Non- Damaging Fluid				
52	Potassium Chloride	1,000	Lbs		
53	Ammonium Chloride	1,000	Lbs		
54	Non-Damaging Clean Out Fluid (Gel)	1,000	Gal		
55	Mutual Solvent	1,000	Gal		
56	Alcohol	1,000	Gal		
Crane	e Services Inclusive of Operator				
57	40-50 ton Hydraulic Crane Operating Charges	3	Days		
58	40-50 ton Hydraulic Crane Standby Charges	2	Days		
59	Crane with operator Mob/Demob	1,300	KM		
Total/well (US\$)					
	Total	for Estima	ated 03 we	ells (US\$)	

TABLE TOT		
Table No.	Description	Value (US\$)
Table A	NITROGEN KICK-OFF	
Table B	STIMULATION(HCL SOLUTION) / NITROGEN KICK-OFF	
Table C	SAND STONE STIMULATION (MUD ACID SOLUTION)/ KICK OFF	
Table D	SAND STONE STIMULATION (ORGANIC ACID SOLUTION)/ KICK OFF	
Table E	WELL CLEAN OUT (XYLENE WASH) / NITROGEN KICK-OFF	
Table F	SAND PLUG/ ZONAL ISOLATION	
Table G	THRU TUBING CT SERVICES	
	GRAND TOTAL OF GROUP A (ESTIMATED 100 WELLS)	

FINANCIAL EVALUATION MODEL GROUP "B" (SINDH & BALUCHISTAN)

(A) N	IITROGEN KICK-OFF				
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/ UOM	Total Cost =P x Q US\$
1.5",	/1.75" /2" CT Services (Complete setup/crew)				
1	Coil Tubing Unit using Category 1 PCE Operating Charges	3	Days		
2	Coil Tubing Unit using Category 1 PCE Standby Charges	2	Days		
3	Coil Tubing Unit using Category 2 PCE Operating Charges	3	Days		
4	Coil Tubing Unit using Category 2 PCE Standby Charges	2	Days		
5	Coil Tubing Unit using Category 3 PCE Operating Charges	3	Days		
6	Coil Tubing Unit using Category 3 PCE Standby Charges	2	Days		
7	Coil Tubing Crew Operating Charges	3	Days		
8	Coil Tubing Crew Standby Charges	2	Days		
9	Coil Tubing Cumulative Depth Charges for Non-Corrosive	5,000	Meters		
10	Environment. BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days		
11	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	2	Days		
	joint, Circulating Sub, MHA, Nozzle Various Types, Weight				
	Bars, Riser, etc.) Standby Charges				
12	Coil Tubing Unit Mob/Demob	1,300	КМ		
13	Coil Tubing Crew Mob/Demob	1,300	КМ		
Nitro	gen and pumping services(Complete Setup/Crew)	·			
14	Nitrogen Pumping Equipment Operating Charges	3	Days		
15	Nitrogen Pumping Equipment Standby Charges	2	Days		
16	Nitrogen Pumping Crew Operating Charges	3	Days		
17	Nitrogen Pumping Crew Standby Charges	2	Days		
18	Liquid Nitrogen volume Pumping Charges	2,700	Gals		
19	Liquid Nitrogen Charges	3,000	Gals		
20	Liquid Nitrogen Supply Tanker Standby Charges	1	Days		
21	Pumping Crew Operating Charges	3	Days		
22	Pumping Crew Standby Charges	2	Days		
23	Volume Pumping Charges for Non-Corrosive Fluids using pumping equipment	1,000	Gals		
24	Pumping Equipment Standby Charges	2	Days		
25	Nitrogen Pumping Equipment Mob/Demob	1,300	KM	I	
26	Nitrogen Pumping Crew Mob/Demob	1,300	KM		
27	Pumping Equipment Mob/Demob	1,300	KM		
28	Pumping Crew Mob/Demob	1,300	KM		
29	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	KM		
	e Services inclusive of Operator	_,			
30	40-50 ton Hydraulic Crane Operating Charges	3	Days		
31	40-50 ton Hydraulic Crane Standby Charges	2	, Days		
32	Crane with operator Mob/De-mob	1,300	, KM		
	Total/well (US\$)				
Total for Estimated 54 wells (US\$)					

(B) S	TIMULATION(HCL SOLUTION) / NITROGEN KICK-OFF				
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/ UOM	Total Cost =P x Q US\$
1.5"/	(1.75"/2" CT Services (complete Setup/Crew)				
1	Coil Tubing Unit using Category 1 PCE Operating Charges	3	Days		
2	Coil Tubing Unit using Category 1 PCE Standby Charges	2	Days		
3	Coil Tubing Crew Operating Charges	3	Days		
4	Coil Tubing Crew Standby Charges	2	Days		
5	Coil Tubing Cumulative Depth Charges for Non-Corrosive Environment	5,000	Meters		
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days		
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Standby Charges	2	Days		
8	Coil Tubing Unit Mob/Demob	1,300	КМ	•	
9	Coil Tubing Crew Mob/Demob	1,300	КМ		
Nitro	gen Services (Complete Setup/Crew)				
10	Nitrogen Pumping Equipment Operating Charges	3	Days		
11	Nitrogen Pumping Equipment Standby Charges	2	Days		
12	Nitrogen Pumping Crew Operating Charges	3	Days		
13	Nitrogen Pumping Crew Standby Charges	2	Days		
14	Liquid Nitrogen Pumping Volume Charges	2,700	Gal		
15	Liquid Nitrogen Charges	3,000	Gal		
16	Liquid Nitrogen Supply Tanker Standby Charges	1	Days		
17	Nitrogen Pumping Equipment Mob/Demob	1,300	KM		
18	Nitrogen Pumping Crew Mob/Demob	1,300	KM		
19	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	KM		
Stim	ulation Services (Complete Setup/Crew)				
20	Stimulation Crew Operating Charges	3	Days		
21	Stimulation Crew Standby Charges	2	Days		
22	Stimulation Equipment Standby Charges	2	Days		
23	Volume Pumping Charges for Non-Corrosive Fluids using stimulation equipment	10,000	Gal		
24	Volume Pumping Charges for Corrosive Fluid using stimulation equipment	4,000	Gal		
25	500 BBL Tank Charges	5	Days		
26	Supply Truck for Acid Standby Charges	1	Days		
27	Trailer for Supply of Chemicals Standby Charges	1	Days		
28	Stimulation Equipment Mob/Demob	1,300	КМ		
29	Stimulation Crew Mob/Demob	1,300	КМ		
30	500 BBLS Tank Mob/Demob	1,300	КМ		
31	Supply Truck for Acid Mob/Demob	1,300	КМ		
32	Trailer for Supply of Chemicals Mob/Demob	1,300	KM		
1	stone Treatment				
33	Treating Solution: 15% HCl upto 250 ^o F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 12 hrs. inhibition time				

34	Treating Solution: 15% HCl upto 350 ^o F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 12 hrs. inhibition time				
35	Treating Solution: 15% HCl above 350 °F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 8 hrs. inhibition time				
36	Treating Solution: 7.5% HCl upto 250 ^o F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 12 hrs. inhibition time				
37	Treating Solution: 7.5% HCl upto 350 ^o F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 12 hrs. inhibition time				
38	Treating Solution: 7.5% HCl above 350 °F c/w 2,000 ppm	1,000	Gal		
	iron control with chelating agent, 08 hrs. inhibition time				
39	Diverting Agent	100	Gal		
40	Gelling Agent	100	Gal		
41	Alcohol	500	Gal		
42	Mutual Solvent	200	Gal		
43	Ammonium Chloride	1,000	Lbs		
44	Potassium Chloride	1,000	Lbs		
45	Soda Ash	1,000	Lbs		
46	Caustic Soda	1,000	Lbs		
Crane Services Inclusive of Operator					
47	40-50 ton Hydraulic Crane Operating Charges	3	Days		
48	40-50 ton Hydraulic Crane Standby Charges	2	Days		
49	Crane with operator Mob/Demob	1,300	KM		
Total/well (US\$)					

Total for Estimated 10 wells (US\$)

(C) 9	SAND STONE STIMULATION (MUD ACID SOLUTION)/ KI				
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) Us\$/UOM	Total Cost =P x Q US\$
1.5"/	(1.75"/2" CT Services (complete Setup/Crew)		1		·
1	Coil Tubing Unit using Category 3 PCE Operating Charges	3	Days		
2	Coil Tubing Unit using Category 3 PCE Standby Charges	2	Days		
3	Coil Tubing Crew Operating Charges	3	Days		
4	Coil Tubing Crew Standby Charges	2	Days		
5	CT Cumulative Depth Charges for Corrosive Environment (CO2 \ge 5 %, H2S \ge 10 PPM)	5,000	Meters		
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days		
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Standby Charges	2	Days		
8	Coil Tubing Unit Mob/Demob	1,300	KM		
9	Coil Tubing Crew Mob/Demob	1,300	KM		
Nitro	gen Services (Complete Set Up)				
10	Nitrogen Pumping Equipment Operating Charges	3	Days		
11	Nitrogen Pumping Equipment Standby Charges	2	Days		
12	Nitrogen Pumping Crew Operating Charges	3	Days		
13	Nitrogen Pumping Crew Standby Charges	2	Days		
14	Liquid Nitrogen Pumping Volume Charges	2,700	Gal		
15	Liquid Nitrogen Charges	3,000	Gal		

10	Linuid Nitronon Cumply Toplay Stop dby Charges	1	Davia		
16	Liquid Nitrogen Supply Tanker Standby Charges	1	Days		
17	Nitrogen Pumping Equipment Mob/Demob	1,300	KM		
18	Nitrogen Pumping Crew Mob/Demob	1,300	KM		
19	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	KM		
	ulation Services (Complete setup)		<u> </u>		
20	Stimulation Crew Operating Charges	3	Days		
21	Stimulation Crew Standby Charges	2	Days		
22	Stimulation Equipment Standby Charges	2	Days		
23	Volume Pumping Charges for Non-Corrosive Fluids using stimulation equipment		Gal		
24	Volume Pumping Charges for Corrosive/Abrasive Fluid using stimulation equipment	4,000	Gal		
25	500 BBL Tank Charges	5	Days		
26	Supply Truck for Acid Standby Charges	1	Days		
27	Trailer for Supply of Chemicals Standby Charges	1	Days		
28	Stimulation Equipment Mob/Demob	1,300	KM		
29	Stimulation Crew Mob/Demob	1,300	KM		
30	500 BBLS Tank, Mob/Demob	1,300	KM		
31	Supply Truck for Acid Mob/Demob	1,300	KM		
32	Trailer for Supply of Chemicals Mob/Demob	1,300	КМ		
Sand	Stone Treatment - 12% HCL & 3% HF Acid	<u> </u>			
33	Regular Mud Acid upto 250 ^o F: (12% HCl + 3%HF) c/w 2,000ppm iron control with chelating agent, 12 hrs inhibition time	1,000	Gal		
34	Regular Mud Acid upto 350 ^o F: (12% HCl + 3%HF) c/w 2,000ppm iron control with chelating agent, 12 hrs inhibition time	1,000	Gal		
35	Regular Mud Acid above 350 ^o F: (12% HCl + 3%HF) c/w 2,000ppm iron control with chelating agent, 08 hrs.	1,000	Gal		
26	inhibition time	100			
36	Diverting Agent	100	Gal		
37	Ammonium Chloride	1,000	Lbs		
38	Potassium Chloride	1,000	Lbs		
39	Soda Ash	1,000	Lbs		
40	Caustic Soda	1,000	Lbs		
	e Services Inclusive of Operator	-			
41	40-50 ton Hydraulic Crane Operating Charges	3	Days		
42	40-50 ton Hydraulic Crane Standby Charges	2	Days		
43	Crane with operator Mob/Demob	1,300	KM		
				/ell (US\$)	
	Total fo	or Estima	ated 10 we	ells (US\$)	
(D) 9	SAND STONE STIMULATION (ORGANIC ACID SOLUTION)/ KICK	OFF		
				Unit	Total
		Qty.	UOM	Cost	Cost
Sr.	Services	(Q)	(U)	(P)	=P x Q
				US\$/UOM	US\$
1.5"/	1.75"/2" CT Services (complete Setup/Crew)		ı		
1	Coil Tubing Unit using Category 2 PCE Operating Charges	3	Days		
2	Coil Tubing Unit using Category 2 PCE Standby Charges	2	Days		
3	Coil Tubing Crew Operating Charges	3	Days		
4	Coil Tubing Crew Standby Charges	2	Days		
•	0	_	- 7-	1	

5	CT Cumulative Depth Charges Non Corrosive	5,000	Meters		
5	Environment	3,000	Weters		
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	3	Days		
0	joint, Circulating Sub, MHA, Nozzle Various Types, Weight	5	Days		
	Bars, Riser, etc.) Operating Charges				
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	2	Days		
,	joint, Circulating Sub, MHA, Nozzle Various Types, Weight	2	Days		
	Bars, Riser, etc.) Standby Charges				
8	Coil Tubing Unit Mob/Demob	1,300	КМ		
9	Coil Tubing Crew Mob/Demob	1,300	KM		
	gen Services (Complete Set Up)	_,			
10	Nitrogen Pumping Equipment Operating Charges	3	Days		
11	Nitrogen Pumping Equipment Standby Charges	2	Days		
12	Nitrogen Pumping Crew Operating Charges	3	Days		
13	Nitrogen Pumping Crew Standby Charges	2	Days		
14	Liquid Nitrogen Pumping Volume Charges	2,700	Gal		
15	Liquid Nitrogen Charges	3,000	Gal		
16	Liquid Nitrogen Supply Tanker Standby Charges	3,000	Days		
17	Nitrogen Pumping Equipment Mob/Demob	1,300	KM		
18	Nitrogen Pumping Crew Mob/Demob	1,300	KM		
19	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	KM		
	ulation Services (Complete setup)	_,			
20	Stimulation Crew Operating Charges	3	Days		
21	Stimulation Crew Standby Charges	2	Days		
22	Stimulation Equipment Standby Charges	2	Days		
23	Volume Pumping Charges for Non-Corrosive Fluids using	10,000	Gal		
	stimulation equipment	,			
24	Volume Pumping Charges for Corrosive Fluid using	4,000	Gal		
	stimulation equipment	,			
25	500 BBL Tank Charges	3	Days		
26	Supply Truck for Acid Standby Charges	1	Days		
27	Trailer for Supply of Chemicals Standby Charges	1	Days		
28	Stimulation Equipment Mob/Demob	1,300	KM		•
29	Stimulation Crew Mob/Demob	1,300	KM		
30	500 BBL Tank, Mob/Demob	1,300	KM		
31	Supply Truck for Acid , Mob/Demob	1,300	KM		
32	Trailer for Supply of Chemicals , Mob/Demob	1,300	KM		
Sand	Stone Treatment – Organic Acid Solution				
33	10% Acetic Acid complete with 2,000 ppm iron control	1,000	Gal		
	with chelating agent, 12 hrs. inhibition time Up to 250 $^{ m 0}$ F				
34	10% Acetic Acid complete with 2,000 ppm iron control	1,000	Gal		
	with chelating agent, 12 hrs. inhibition time Up to 350 $^{\circ}$ F				
35	10% Acetic Acid complete with 2,000 ppm iron control	1,000	Gal		
	with chelating agent, 8 hrs. inhibition time above 350 ^o F				
36	9% Formic Acid complete with 2,000 ppm iron control	1,000	Gal		
	with chelating agent, 12 hrs. inhibition time Up to 250 °F				
37	9% Formic Acid complete with 2,000 ppm iron control	1,000	Gal		
	with chelating agent, 12 hrs. inhibition time Up to 350 °F				
38	9% Formic Acid complete with 2,000 ppm iron control	1,000	Gal		
	with chelating agent, 8 hrs. inhibition time above 350 °F				
39	Diverting Agent	100	Gal		
40	Mutual Solvent	500	Gal		

41	Ammonium Chloride	1,000	Lbs			
42	Potassium Chloride	1,000	Lbs			
43	Soda Ash	1,000	Lbs			
44	Caustic Soda	1,000	Lbs			
Cran	Crane Services Inclusive of Operator					
45	40-50 ton Hydraulic Crane Operating Charges	3	Days			
46	40-50 ton Hydraulic Crane Standby Charges	2	Days			
47	Crane with operator Mob/Demob	1,300	KM			
Total/well (US\$)						
Total for Estimated 10 wells (US\$)						

(E) \	(E) WELL CLEAN OUT (XYLENE WASH) / NITROGEN KICK-OFF						
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/UOM	Total Cost =P x Q US\$		
1.5"/	(1.75"/2" CT Services (complete Setup/Crew)						
1	Coil Tubing Unit using Category 1 PCE Operating Charges	3	Days				
2	Coil Tubing Unit using Category 1 PCE Standby Charges	2	Days				
3	Coil Tubing Crew Operating Charges	3	Days				
4	Coil Tubing Crew Standby Charges	2	Days				
5	Coil Tubing Cumulative Depth Charges for Non corrosive Environment	5,000	Meters				
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Operating Charges	3	Days				
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.) Standby Charges	2	Days				
8	Coil Tubing Unit Mob/Demob	1,300	KM				
9	Coil Tubing Crew Mob/Demob	1,300	KM				
Nitro	gen Services (Complete Set Up)						
10	Nitrogen Pumping Equipment Operating Charges	3	Days				
11	Nitrogen Pumping Equipment Standby Charges	2	Days				
12	Nitrogen Pumping Crew Operating Charges	3	Days				
13	Nitrogen Pumping Crew Standby Charges	2	Days				
14	Liquid Nitrogen Pumping Volume Charges	2,700	Gal				
15	Liquid Nitrogen Charges	3,000	Gal				
16	Liquid Nitrogen Supply Tanker Standby Charges	2	Days				
17	Nitrogen Pumping Equipment Mob/Demob	1,300	KM				
18	Nitrogen Pumping Crew Mob/Demob	1,300	KM				
19	Liquid Nitrogen Supply Tanker Mob/Demob	1,300	KM				
Stim	ulation Services (Complete setup)						
20	Stimulation Crew Operating Charges	3	Days				
21	Stimulation Crew Standby Charges	2	Days				
22	Stimulation Equipment Standby Charges	2	Days				
23	Volume Pumping Charges for Non-Corrosive Fluids using	1,000	Gal				
	stimulation equipment						
24	250-300 BBL Tank Charges	5	Days				
25	Trailer for Supply of Chemicals Standby Charges	1	Days				
26	Stimulation Equipment Mob/Demob	1,300	KM				
27	Stimulation Crew Mob/Demob	1,300	КM				

28	250-300 BBL Tank Mob/Demob	1,300	КМ		
20	Trailer for Supply of Chemicals Mob/Demob	1,300	KM		
	ne wash chemicals	1,500	KIVI		
	Corrosion Inhibitor up to 250 °F	20	Cal		
30		20	Gal		
31	Xylene	400	Gal		
	e Services Inclusive of Operator		-		
32	40-50 ton Hydraulic Crane Operating Charges	3	Days		
33	40-50 ton Hydraulic Crane Standby Charges	2	Days		
34	Crane with operator Mob/Demob	1,300	KM		
				/ell (US\$)	
	Total	for Estima	ted 10 w	ells (US\$)	
(F) S	AND PLUG/ ZONAL ISOLATION				
				Unit	Total
		Qty.	UOM	Cost	Cost
Sr.	Services	(Q)	(U)	(P)	=P x Q
		(x - 7	US\$/UOM	US\$
1.5"/	1.75"/2" CT Services (complete Setup/Crew)				-
1	Coil Tubing Unit using Category 1 PCE Operating Charges	3	Days		
2	Coil Tubing Unit using Category 1 PCE Standby Charges	2	Days		
3	Coil Tubing Crew Operating Charges	3	Days		
4	Coil Tubing Crew Standby Charges	2	Days		
5	Coil Tubing Cumulative Depth Charges for Corrosive	5,000	Meters		
0	Environment (CO2 \geq 5 %, H2S \geq 10 PPM)	3)000	meters		
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	3	Days		
	joint, Circulating Sub, MHA, Nozzle Various Types,	Ū.	20.70		
	Weight Bars, Riser, etc.) Operating Charges				
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle	2	Days		
	joint, Circulating Sub, MHA, Nozzle Various Types,	-	20.70		
	Weight Bars, Riser, etc.) Standby Charges				
8	Coil Tubing Unit Mob/Demob	1,300	КМ		
9	Coil Tubing Crew Mob/Demob	1,300	KM		
	ulation Services (Complete setup)	1,000			
10	Stimulation Crew Operating Charges	3	Days		
11	Stimulation Crew Standby Charges	2	Days		
12	Stimulation Equipment Standby Charges	2	Days		
13	Volume Pumping Charges for Non-Corrosive Fluids using	10,000	Gal		
	stimulation equipment	10,000			
14	Volume Pumping Charges for Corrosive/Abrasive Fluids	4,000	Gal	1	
-	using stimulation equipment	.,000			
15	500 BBL Tank Charges	5	Days	1	
16	Trailer for Supply of Chemicals Standby Charges	1	Days	1	
17	Stimulation Equipment Mob/Demob	1,300	KM	1	
18	Stimulation Crew Mob/Demob	1,300	KM		
19	500 BBL Tank Mob/Demob	1,300	KM		
20	Trailer for Supply of Chemicals Mob/Demob	1,300	KM	1	
	Plug Chemicals	1,000			
21	Potassium Chloride	1,000	Lbs		
22	Ammonium Chloride	1,000	Lbs		
22	Silica Sand	1,000	Lbs		
23	Mesh Sand (30/60)	1,000	Lbs		
24	Mesh Sand (20/40)	1,000	Lbs	-	
25	ivicsii Jallu (20/40)	1,000	LDS	1	

Crane Services Inclusive of Operator						
26	40-50 ton Hydraulic Crane Operating Charges	3	Days			
27	40-50 ton Hydraulic Crane Standby Charges	2	Days			
28	Crane with operator Mob/Demob	1,300	KM			
	Total/well (US\$)					
Total for Estimated 03 wells (US\$)						

(G)	(G) THRU TUBING CT SERVICES						
Sr.	Services		UOM (U)	Unit Cost (P) US\$/UOM	Total Cost =P x Q US\$		
1.5"/	(1.75"/2" CT Services (complete Setup/Crew)						
1	Coil Tubing Unit using Category 2 PCE Operating Charges	3	Days				
2	Coil Tubing Unit using Category 2 PCE Standby Charges	2	Days				
3	Coil Tubing Crew Operating Charges	3	Days				
4	Coil Tubing Crew Standby Charges	2	Days				
5	Coil Tubing Cumulative Depth Charges for Non Corrosive Environment	5,000	Meters				
6	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc. including High Pressure Jetting / Rotating Tool) Operating Charges	3	Days				
7	BHA (Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc. including High Pressure Jetting / Rotating Tool) Standby Charges	2	Days				
8	Coil Tubing Unit Mob/Demob	13,00	KM				
9	Coil Tubing Crew Mob/Demob	13,00	KM				
Thru	Tubing Services With Back Up Tools						
10	Internal Dimple Connector - Operating	2	Days				
11	Internal Dimple Connector - Stand by	1	Days				
12	External Dimple Connector - Operating	2	Days				
13	External Dimple Connector - Stand by	1	Days				
14	Upto 2-1/8" Size Down hole filter - Operating	2	Days				
15	Upto 2-1/8" Size Down hole filter -Stand By	1	Days				
16	Upto 2-1/8" Size Thru Tubing Motor - Operating	2	Days				
17	Upto 2-1/8" Size Thru Tubing Motor - Stand By	1	Days				
18	Upto 2-1/8" Size Thru Tubing weight bar - Operating	2	Days				
19	Upto 2-1/8" Thru Tubing weight bar - Standby	1	Days				
20	Upto 2-1/8" Flat Bottom Mill - Operating	2	Days				
21	Upto 2-1/8" Flat Bottom Mill - Stand By	1	Days				
22	Upto 2-1/8" Tapered Mill -Operating	2	Days				
23	Upto 2-1/8" Tapered Mill - Stand By	1	Days				
24	Upto 2-1/8" Junk Mill - Operating	2	Days				
25	Upto 2-1/8" Junk Mill - Stand By	1	Days				
26	Upto 2-1/8" Impact Hammer - Operating	2	Days				
27	Upto 2-1/8" Impact Hammer – Standby	1	Days				
28	Upto 2-1/8" Accelerator – Operating	2	Days				
29	Upto 2-1/8" Accelerator - Stand by	1	Days				
30	Centralizer - Operating	2	Days				
31	Centralizer - Stand by	1	Days				

	1		1		1	
32		st sub - Operating	2	Days		
33	Pull tes	st sub - Stand by	1	Days		
34	Surface	e filter - Operating	2	Days		
35	Surface	e filter - Standby	1	Days		
36	Debris	Filter charges	10	Nos.		
37	Thru Ti	ubing Screen Filter Charges	20	Nos.		
38	Thru Ti	ubing Crew - Operating	3	Days		
39	Thru Ti	ubing Crew - Standby	2	Days		
40	Thru Ti	ubing Tools Mob/Demob	1,300	KM		
41	Thru Ti	ubing crew Mob/Demob	1,300	KM		
Stim	ulation S	Services (Complete setup)				
42	Stimula	ation Crew Operating Charges	3	Days		
43	Stimula	ation Crew Standby Charges	2	Days		
44	Stimula	ation Equipment Standby Charges	2	Days		
45	Volume Pumping Charges for Non-Corrosive Fluids using		10,000	Gal		
	stimulation equipment					
46	500 BBL Tank Charges		5	Days		
47	Trailer for Supply of Chemicals Standby Charges		1	Days		
48	Stimula	ation Equipment Mob/Demob	1,300	KM		
49	Stimula	ation Crew Mob/Demob	1,300	KM		
50	500 BB	L Tank Mob/Demob	1,300	KM		
51	Trailer	for Supply of Chemicals Mob/Demob	1,300	KM		
Clear	n Out No	on- Damaging Fluid				
52	Potassi	ium Chloride	1,000	Lbs		
53	Ammo	nium Chloride	1,000	Lbs		
54	Non-Da	amaging Clean Out Fluid (Gel)	1,000	Gal		
55	Mutua	l Solvent	1,000	Gal		
56	Alcoho		1,000	Gal		
Cran	e Servic	es Inclusive of Operator				
57	40-50 t	on Hydraulic Crane Operating Charges	3	Days		
58	40-50 ton Hydraulic Crane Standby Charges		2	Days		
59	Crane	with operator Mob/Demob	1,300			
					/ell (US\$)	
		Total	for Estima	ated 03 we	ells (US\$)	
TAB		ALIZER GROUP "B"				
	Table No. Description Value (US\$)					
Table		NITROGEN KICK-OFF				- 71

Table No.	Description	Value (US\$)
Table A	NITROGEN KICK-OFF	
Table B	STIMULATION(HCL SOLUTION) / NITROGEN KICK-OFF	
Table C	SAND STONE STIMULATION (MUD ACID SOLUTION)/ KICK OFF	
Table D	SAND STONE STIMULATION (ORGANIC ACID SOLUTION)/ KICK OFF	
Table E	WELL CLEAN OUT (XYLENE WASH) / NITROGEN KICK-OFF	
Table F	SAND PLUG/ ZONAL ISOLATION	
Table G	THRU TUBING CT SERVICES	
	GRAND TOTAL OF GROUP B (ESTIMATED 100 WELLS)	

FINANCIAL EVALUATION MODEL GROUP "C" (ALL OVER PAKISTAN)

(A)	SMART /E-COIL SERVICES					
Sr	Services	Qty. (Q)	UOM (U)	Unit Cost (P) US\$/UOM	Total Cost =P x Q US\$	
1.5	/1.75"/2" CT Services (for all Categories PCE) along with Smart	t/E-coil I	Reel			
1	Coil tubing unit with Smart/E-Coil cable and logging Head Operating	2	day			
2	Coil tubing unit with Smart/E-Coil cable and logging Head Standby	1	day			
3	Coil tubing with Smart/E-Coil cable Cumulative Depth Charges for Non-Corrosive Environment (coil tubing +Smart/E-coil Cable)	6,000	Meters			
4	Coil tubing with Smart/E-Coil cable Cumulative Depth Charges for Corrosive Environment CO2 \geq 5 %, H2S \geq 10 PPM	6,000	Meters			
5	Coil tubing unit with Smart/E-coil Reel and logging Head Mob/demob	1,300	КМ			
6	Coil tubing unit with Smart/E-coil Reel and logging Head crew Mob/demob	1,300	КМ			
Pun	nping Services (Complete setup)					
7	Pumping Crew Operating Charges	2	Days			
8	Pumping Crew Standby Charges	1	Days			
9	Pumping Equipment Standby Charges	1	Days			
10	Volume Pumping Charges for Non-Corrosive Fluids using Pumping equipment	2,000	Gal			
11	Pumping Equipment Mob/Demob	1,300	KM			
12	Pumping Crew Mob/Demob	1,300	KM			
Cran	Crane Services Inclusive of Operator					
13	40-50 ton Hydraulic Crane Operating Charges	2	Days			
14	40-50 ton Hydraulic Crane Standby Charges	1	Days			
15	Crane with operator Mob/Demob	1,300	KM			
		Т	otal/we	ell (US\$)		
	Тс	otal for	15 wel	ls (US\$)		

(B)	(B) EXPANDABLE RETAINERS/BRIDGE PLUGS:							
Sr.	Description	Otv	UOM	Unit Rate (US\$/UOM) Retrieved Left in		Total C (US\$		
51.	Description	Qty.				Retrieved	Left in	
					hole		hole	
1	Expandable Retainers/bridge plugs (2-	3	Nos.					
	7/8" tubing to 5"-7" Liner/casing) on							
	location charges							
2	Expandable Retainers/Bridge plugs (3-	3	Nos.					
	1/2" tubing to 5"-7" Liner/casing) on							
	location charges							

3	Expandable Retainers/Bridge plugs (4- 1/2" tubing to 5"-7" Liner/casing) on location charges	3	Nos.			
4	Expandable Retainers/Bridge plugs (5- 1/2" tubing to 5"-7" Liner/casing)	3	Nos.			
				Total Co	ost(US\$)	

(C)	(C) EXPANDABLE RETAINERS/BRIDGE PLUG SERVICES:							
Sr.	Description	Qty. (Q)	UOM (U)		Unit Cost (P)	Total Cost =P x Q		
				US\$/UOM	US\$			
1	Expandable Retainers/Bridge plugs crew with setting kit Operating	2	Day					
2	Expandable Retainers/Bridge plugs crew with setting Standby	1	Day					
3	Expandable Retainers/Bridge plugs crew with setting kit Mob/Demob.	2,600	KM					
	Total/well (US\$)							
	Total for 15 wells (US\$)							

TABLE TOT	TABLE TOTALIZER GROUP "C"					
Table No.	Description	Value (US\$)				
Table A	SMART /E-COIL SERVICES					
Table B	EXPANDABLE RETAINERS/ BRIDGE PLUG S(LEFT IN HOLE COST TO BE USED)					
Table C	EXPANDABLE RETAINERS/ BRIDGE PLUG SERVICES					
	GRAND TOTAL OF GROUP C					

Note for all Groups (GROUP A, B & C):

- Financial Evaluation shall be carried out on each Group wise/Grand Total of each Group and Contract shall be awarded to lowest evaluated bidder in each Group.
- The unit rates mentioned in "format for rates" will prevail, in case different rate against same item is quoted in "Financial evaluation model".
- Any additional items not covered in the table may be utilized as per published price book, if required, subject to approval of OGDCL Management.
- Quantities mentioned are for evaluation purposes only. Actual invoicing shall depend on the work carried out.
- Mob/De-mob charges for equipment/crew will be as per actual i.e. the point from where the equipment/crew was mobilized.
- The bidder to quote same rates for same items in different tables.