

TERMS OF REFERENCE / SCOPE OF WORK

1. SCOPE OF WORK:

Hiring Coil tubing, Nitrogen pumping, Nitrogen, Stimulation/Pumping, Thru Tubing & associated services for 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 160 Jobs.

2. TERMS AND CONDITIONS:

- 2.1 Bidder participating in tender for Sindh and Baluchistan and also participating in tender for same services for Punjab and KPK will have to provide the equipment and crew as per requirement mentioned in technical evaluation criteria.
- 2.2 Bidders having capacity in terms of crew and equipment to fulfil the requirement for only one tender/zone but applied for more than one tender/zone for hiring of same services at OGDCL will be technically disqualified for any of the tender/zones as deemed fit by OGDCL.
- 2.3 All certificates, documents, proof of work etc. should be in English language; if not then same shall be accompanied with certified translation in English language.
- 2.4 Coil tubing of each size should have effective workable life well enough for the contract period.
- 2.5 Coil tubing size requirement
 - i) 1.5" Coil size up to $\pm 5,500$ M length along with each coil tubing unit and 01 additional 1.5" coil as backup.
 - ii) One set 1.75" ($\pm 4,300$ M) coil size.
 - iii) One set 2" ($\pm 4,000$ M) coil size to be arranged within 45 days after signing of contract with OGDCL.
- 2.6 All HSEQ responsibility for any third party equipment and personnel supplied by the contractor shall rest with the contractor.
- 2.7 All the equipment should be in good working condition, valid calibration and third party inspection certificates should be available with field service crew for verification by field engineer prior to start of job.
- 2.8 OGDCL shall not be liable to pay any mobilization/demobilization of tools/equipment for bringing them to Pakistan that may be located elsewhere.
- 2.9 Contractor to provide the list of equipment, tools and other accessories wherever required by OGDCL before mobilizing to wellsite.
- 2.10 HSE / safety related equipment in working condition should be available during all jobs.
- 2.11 Bidder to arrange all safety equipment/services at their own for their personnel for working in extreme H₂S environment with no additional cost to OGDCL.
- 2.12 OGDCL shall not be accountable for any personnel injury during Mob/De-mob, loading, offloading and during the course of operations at well site. Health/accidental insurance cover of deployed crew will be the responsibility of the bidder.
- 2.13 Adequate back-up services / equipment should be available at well site. However, OGDCL will not pay for backup equipment.
- 2.14 All technical details for items/equipment specified in Section "Technical Evaluation Criteria" must be covered in the technical bid.
- 2.15 Any type of fluid not limited to nitrogen, mud, brine, stimulation slurry, sand plug slurry, cement plug slurry, gel, crude oil, diesel etc. can be pumped using service company coil tubing, stimulation/pumping package or pump unit.
- 2.16 Contractor may provide standard price list for additional material, equipment and tools required for the job. The same will be used as reference for obtaining Management approvals when required.
- 2.17 The equipment and crew have to work round the clock as per operational activities.

- 2.18 Bidders to attach unpriced financial bids in their technical bids.
- 2.19 Stimulation job will be performed either through bull heading or through coil tubing.
- 2.20 All equipment must be H₂S/CO₂ compliant.
- 2.21 Maximum notice period for each call-out is 3 days and transit time from company base to OGDCL location is 2 days.
- 2.22 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 mobilization.
- 2.23 The bidder will provide complete list of personnel to be deployed for the jobs along with CVs.
- 2.24 OGDCL reserves the right to ask bidder for the replacement of any of their personnel due to incompetence or misbehavior at contractor's expense.
- 2.25 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.
- 2.26 Invoice for unsuccessful job i.e. due to mechanical failure of contractor's equipment or inefficiency of well site crew will not be paid.
- 2.27 Standard coil tubing BHA for Nitrogen kick Off, stimulation and other relevant jobs must include but not limited to Connector, DFCV, Hydraulic Disconnect, knuckle joint, Circulating Sub, MHA, Nozzle Various Types, Weight Bars, Riser, etc.
- 2.28 Pressure test and pull test before start of job is to be carried out by Service Company following standard procedure using their own equipment and crew. No charges will be applicable for equipment and crew used for pressure test and pull test before start of job.
- 2.29 Pump unit services includes 10K/15K pumper and surface piping. Charges are applicable only when used where standalone requirement exist.
- 2.30 Stimulation/Pumping equipment package includes 10K/15K pumpers, chemical transfer pump, centrifugal pumps, RMX/batch mixer/blender, Poly tank(s) for raw acid storage, 500 BBL storage tank(s), chemical truck/tanker, surface piping etc. and all other necessary equipment which ever required for successful stimulation/pumping job.
- 2.31 Operating charges for stimulation/pumping equipment package are not applicable. Only volume pumping charges will be paid.
- 2.32 OGDCL has the sole discretion to utilize the services as whole or partial and the service company will have to provide complete or partial services accordingly.
- 2.33 Evaluation tables are for evaluation purpose only, job design and acid recipes may change as per actual well conditions.
- 2.34 Chemical quantities, millage, number of days for operating and standby are for evaluation purpose only, payment will be made as per actual.
- 2.35 The number of jobs may increase or decrease as per actual operation. The approved amount against the contract will be collectively used for any number of jobs/wells.
- 2.36 Fuel, oil and lubricants 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.
- 2.37 There will be no standby charges on the reporting day at location and the day the contractor is demobilized for both equipment and crew including Nitrogen supply tanker and Acid supply tanker.
- 2.38 Standby charges for nitrogen supply tanker on the day(s) when nitrogen is being shifted to Nitrogen pumping unit are not admissible.
- 2.39 Standby charges for acid supply tanker on the day(s) when acid is being shifted to stimulation equipment are not admissible.

- 2.40 The standby rates of equipment and personnel must not exceed 50 % of operational charges for all equipment / personnel. Any standby charges quoted above 50% shall be considered 50% for evaluation and payment purpose.
- 2.41 OGDCL shall not be liable to pay for any leftover chemicals. Handling / safe disposal of all chemicals before and after the job will be the responsibility of the contractor.
- 2.42 Most of the stimulation jobs are carried out using OGDCL standard recipes based on solubility test. Solubility test to be provided free of cost by the contractor.
- 2.43 For wells where standard recipes does not work, contractor will provide stimulation design based on XRD test results using industry accepted software. The price for additional chemicals (which are not covered in the contract) if required will be used from contractor's standard price list with 50% discount after approval from OGDCL management.
- 2.44 Lighting arrangement if required at well site is to be arranged by the bidder.
- 2.45 Bidder to quote same rate and same code for same temperature range chemicals mentioned at different places in tender document e.g. in acid recipes', additional chemicals list etc.
- 2.46 OGDCL can use chemicals individually mentioned in acid recipes for any requirement at same rate mentioned in acid recipe.
- 2.47 Rig up/Rig down and chemical mixing period before start of job will be paid as standby for both equipment and crew.
- 2.48 Daily operating charges for coil tubing equipment and crew will commence from the day/date coil tubing is lowered into the well bore and would cease when coil tubing is out of hole.
- 2.49 The coil tubing cumulative depth is defined as the accumulated downward movement of the coil tubing.
- 2.50 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).
- 2.51 Daily operating charges for Nitrogen pumping equipment/crew if applicable would commence when the Nitrogen cool down/pumping is started and would cease when nitrogen pumping is finished/stopped.
- 2.52 Daily operating charges for Pumping/Stimulation package crew, pump unit and respective crew would commence when pumping is started and would cease when pumping is finished/stopped.
- 2.53 If, after mobilization / reporting at site, job is cancelled then mobilization / demobilization charges for crew / equipment along with standby charges to be paid from reporting day to demobilization day. Job cancellation charges are not admissible.
- 2.54 Well to well movement of both equipment and crew within the same field is the responsibility of the bidder without any charge to OGDCL.
- 2.55 Mob/De-mob charges for equipment & crew will be calculated as per OGDCL distance chart for the locations covered in the chart and as per actual for the locations not covered in OGDCL location distance chart.
- 2.56 During coil tubing operation, environment would be treated as corrosive if respective recorded values of CO₂ exceeds 5 % or H₂S exceeds 10 PPM by volume. Extra charges for corrosive environment to be incorporated including adjusted additional dosage of chemicals e.g. corrosion inhibitor, inhibitor aid, H₂S scavenger, H₂S-CO₂ Inhibitor etc. Extra charges for chemicals to combat corrosive environment will not be paid by OGDCL.
- 2.57 Cost of liquid nitrogen would only be paid for the volume shifted to nitrogen pumper.
- 2.58 Contractor should have no objection if Nitrogen is provided by OGDCL.
- 2.59 The lost in hole (LIH)/DBR charges for bottom hole tools (BHA) and actual damaged/LIH coil tubing length will be paid by OGDCL as per following criteria subject to the conditions that there is no malfunctioning of service company equipment and loss/DBR 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.
- 2.60 If required third party inspection/evaluation for LIH/DBR will be carried as per predefined scope with mutual consent. Cost for third party inspection/evaluation will be on bidders account.
- 2.61 Bidder must give “Clean acceptance certificate” of OGDCL terms and conditions and if exceptions are found, the bidder will withdraw all exceptions.
- 2.62 The scope of work is tentative. OGDCL may increase or decrease the scope of work without any change in rates and terms & conditions.
- 2.63 OGDCL reserves the right to accept or reject any/all bid(s) or annul the entire bidding process at any time prior to award of contract without taking any responsibility of the affected bidder(s) and is not bound to justify the reasons to the affected bidder(s).
- 2.64 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.
- 2.65 Bidder to comply with OGDCL’s HSEQ policy.

3. DURATION OF CONTRACT:

- 3.1 The duration of the contract will be three (03) years starting from date of signing of contract.
- 3.2 The bid proposal/rates should remain valid unconditionally during the term of contract.
- 3.3 The **Rate Running Contract** (as and when required basis) will remain intact till the completion of jobs on wells where contractor is mobilized for the job during the contract period. Extension in term of contract will be subject to mutual consent of both the parties in writing.

4. PAYMENT TERMS:

- 4.1 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.
- 4.2 The payment will be made in 100% Pak rupees against verified invoices at official exchange rate prevalent on the date of payment.

(This clause will prevail instead of Master Tender document “ITB” clause # 07 ‘PAYMENT’).

5. BID BOND:

Bid bond/Bid security amounting to US\$ 20,000.00 (US Dollar Twenty Thousand Only) is to be attached/provided with financial bid. Please see master set of tender document for further details.

6. BIDDING METHOD:

- 6.1 Bids against this tender are invited on “**Single Stage Two Envelope Bidding Procedure**” through press tendering.
- 6.2 The bidders shall submit one original technical and one original financial bid along with soft copies of technical bids sealed in respective envelop.

Note: The Master set of tender documents for services uploaded on OGDCL website (www.ogdcl.com) is the integral part of this TOR.

TECHNICAL EVALUATION

1. Only technically qualified bidder(s) will be considered for financial evaluation.
2. OGDCL reserves the right to visit bidder's operational base, check inventory and verify the information provided in the bid at any stage during evaluation/contract period.
3. All the bidders must fulfill the below mentioned technical requirements for technical qualification. Even single "No" in below mentioned tables for technical evaluation will lead to disqualification.
4. For bidders who have not provided similar services to OGDCL/PPEPCA in the past must fulfill the following criteria for the evaluation/confirmation of their technical capabilities.
 - i) Minimum 05 years' international experience of providing coil tubing, stimulation, thru tubing and allied services along with documentary evidence.
 - ii) Establish complete equipment base setup, shift all equipment and crew as mentioned in technical evaluation criteria to Pakistan and start providing services within 45 days after signing of contract with OGDCL. Failing to do so will result in termination of contract and confiscation of bank guarantee.
5. For the bidders who have provided/are providing similar services to OGDCL/PPEPCA (Petroleum Exploration and Production Companies Association) must have all equipment and crew available in Pakistan at the time of bidding except those mentioned otherwise.

1. EQUIPMENT

Sr.	DESCRIPTION	AVAILABILITY
COIL TUBING SERVICES		
1	COIL TUBING UNIT/ REEL/INJECTOR HEAD	
i	Availability of minimum two (2) coil tubing units with capacity for coil sizes 1.5" (+5,500 M), 1.75" (+4,300 M), 2" (+4,000 M).	Yes/No
ii	Commitment to arrange 3 rd complete coil tubing set up within 45 days of signing of contract and to be provided whenever required by OGDCL.	Yes/No
iii	The coil tubing units must be equipped with latest real time monitoring software (fatigue computation and data acquisition), with self-aligning sliding goose neck, separate power pack drive mechanism and injector heads.	Yes/No
iv	Availability of injector heads with pulling capacity of 60K lbs. & 80K lbs.	Yes/No
2 PRESSURE CONTROL EQUIPMENT (MINIMUM 02 BOPS WITH EACH UNIT)		
i	WCE remote control panel (To be operated from control cabin).	Yes/No
ii	10K Psi rating WCE (CAT-I), compatible to H ₂ S environment.	Yes/No
iii	10K Psi rating WCE (CAT-II), compatible to H ₂ S environment.	Yes/No
iv	15K Psi rating WCE (CAT-III), compatible to H ₂ S environment.	Yes/No
3	To provide adapters/x-overs for coil tubing rig-up as per standard tree top/drill pipe connections without any financial impact.	Yes/No
4	Availability of minimum following Thru tubing milling/fishing tools with backup for completion sizes 2-3/8" to 7". (Can be arranged and made available in Pakistan within 45 Days after signing of contract either own or through third Party contracting).	Yes/No
i	Dimple Connector both internal and external	Yes/No
ii	Down hole filter	Yes/No
iii	Thru tubing motor	Yes/No
iv	Hydraulic tubing cutting tool	Yes/No

v	Flat bottom mill	Yes/No
vi	Tapered mill	Yes/No
vii	Junk mill	Yes/No
viii	Impact hammer	Yes/No
ix	Accelerator	Yes/No
x	Jar	Yes/No
xi	Centralizer both Hydraulic and Mechanical	Yes/No
xii	Surface filter	Yes/No
5	High speed rotating & jetting tools at least 02 Nos.	Yes/No
6	Data acquisition system at least 02 Nos.	Yes/No
7	Abbrasi/Abbrasive or equivalent tubing cutting/perforation tool. (Can be arranged and made available in Pakistan within 45 Days after signing of contract either own or through third Party contracting)	Yes/No
STIMULATION/PUMPING SERVICES		
1	PUMPING UNITS 10 K/15 K PSI WP SINGLE/TWIN PUMPING UNIT	
i	Minimum 02 pumping units having minimum 350 hp -500 hp.	Yes/No
ii	Hook up piping 15,000 Psi rating for performing jobs simultaneously at 02 OGDCL wells immediately after signing of contract	Yes/No
iii	Commitment to arrange 3 rd complete stimulation/pumping package along with crew within 45 Days after signing of contract and to be provided whenever required by OGDCL.	Yes/No
2	MIXING/TANKS WITH HOOK UP PIPING	
i	50 bbl batch mixer at least 03 Nos.	Yes/No
ii	100 bbl Paddle batch mixer at least 02 Nos.	Yes/No
iii	500 bbl storage tanks at least 03 Nos.	Yes/No
iv	250-300 bbl storage tanks at least 02 Nos.	Yes/No
3	STIMULATION RECIPES AND STIMULATION SOFTWARE	
i	Stimulation recipes in line with ITB	Yes/No
ii	Stimulation software (To be arranged within 45 days after signing of contract with OGDCL and commitment for availability in Pakistan throughout the contract validity)	Yes/No
NITROGEN PUMPING SERVICES		
1	Minimum 02 nitrogen pumping units with hook up.	Yes/No
2	Minimum 02 liquid nitrogen cryogenic storage tank. Minimum 2,000 gals capacity.	Yes/No
3	Commitment to arrange 3 rd complete nitrogen pumping package along with crew within 45 days after signing of contract and to be provided whenever required by OGDCL.	Yes/No
ZONE-II CERTIFICATION		
At least one coil tubing unit, pumping and nitrogen equipment are Zone II certified. The bidder to arrange Zone II certification of the remaining units within 45 days of signing of contract failing to do so will result in termination of contract and confiscation of PBG.		Yes/No

BASE SETUP	
Equipment base setup in Sindh to be established within 45 days after issuance of LOI. Equipment base set up must have maintenance shops, compliant pressure test bay, pressure control equipment workshop, chemical storage, spares storage warehouse, temperature control room for oxidizers etc.	Yes/No

2. CREW

Sr.	QUALIFICATION/EXPERIENCE OF CREW MEMBERS	AVAILABILITY
1	<p>CTU ENGINEERS / SPECIALIST (AT LEAST 01 ENGINEER FOR EACH JOB) Graduate Engineer, 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.</p> <ul style="list-style-type: none"> • Nitrogen Kick Off = 100 Jobs • Stimulation = 100 Jobs • Thru tubing jobs = 50 Jobs. 	Yes/No
2	<p>THRU TUBING ENGINEERS (AT LEAST 2 ENGINEERS FOR EACH JOB) Graduate Engineer, minimum five (5) years of exclusive experience of performing thru tubing jobs with CTU along with relevant training(s) and certified courses etc.</p> <ul style="list-style-type: none"> • Must have designed and performed 50 thru tubing jobs. 	Yes/No
3	<p>STIMULATION ENGINEERS / SPECIALIST (AT LEAST 01 ENGINEER FOR EACH JOB) Graduate Engineer, 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</p> <ul style="list-style-type: none"> • Sand Stone Stimulation =100 Jobs • Lime Stone Stimulation =100 Jobs • HPHT Stimulation = 20 Jobs. 	Yes/No
4	<p>SUPERVISOR (AT LEAST 1 SUPERVISORS FOR EACH CATEGORY/JOB) Technical diploma holder (3 Years), minimum five (05) years of exclusive experience of planning, designing and executing jobs along with relevant training(s) and certified courses etc. CTU supervisors must have performed following jobs.</p> <ul style="list-style-type: none"> • Nitrogen Kick Off = 100 Jobs • Stimulation = 100 Jobs • Thru tubing jobs= 50 Jobs. <p>Stimulation supervisors must have performed following jobs.</p> <ul style="list-style-type: none"> • Sand Stone Stimulation =100 Jobs • Lime Stone Stimulation =100 Jobs • HPHT Stimulation = 20 Jobs. 	Yes/No

5	<p>OPERATOR (AT LEAST 02 OPERATORS FOR EACH CATEGORY/JOB) Technical diploma holder/ matric, minimum five (05) years of relevant experience of executing jobs along with relevant certification and training courses etc.</p> <p>CTU Operators must have performed following jobs.</p> <ul style="list-style-type: none"> • Nitrogen Kick Off = 100 Jobs • Stimulation = 100 Jobs • Thru tubing jobs= 50 Jobs. <p>Stimulation Operators must have performed following jobs</p> <ul style="list-style-type: none"> • Sand Stone Stimulation =100 Jobs • Lime Stone Stimulation =100 Jobs • HPHT Stimulation = 20 Jobs. 	Yes/No
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3. COMPANY PROFILE

Sr.	DESCRIPTION	AVAILABILITY
1	BIDDER'S HISTORY (ATTACH PROOF)	
	Registered company in Pakistan or elsewhere for providing coil tubing and stimulation services. Minimum registration period = 03 Years.	Yes/No
2	BIDDER'S CAPABILITIES	
i	Capability in terms of equipment and crew to perform job on deep wells (+5,200 meters) with H ₂ S environment simultaneously on 02 OGDCL wells. Commitment to enhance capabilities to perform jobs simultaneously on three (03) OGDCL wells within 45 days of signing of contract.	Yes/No
ii	Capability in terms of equipment and crew to provide stimulation solutions for sandstone & limestone.	Yes/No
iii	Capability to handle high volume jobs.	Yes/No
iv	Providing Lab & XRD facilities, or commitment thereof for provision of required tests from reputed Laboratory anywhere around the globe.	Yes/No
v	Placing sand plug, cement plug thru coil tubing.	Yes/No
vi	Thru tubing services	Yes/No
vii	Bidder, to provide standard operating procedure (SOPs) for 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 are also to be provided by the bidder.	Yes/No
viii	Bidder, to provide published pressure control manual for standard coil tubing operations & stimulation services.	Yes/No
ix	Bidder, to provide free of cost minimum 06 days basic and advanced coil tubing and stimulation training to two (02) OGDCL Engineers every year. Share a structured training program.	Yes/No

FORMAT FOR STANDARD ACID RECIPES

Note: Companies to formulate Acid recipes for preparation of 1,000 Gals recipe in true letter and spirit. It is mandatory to use all chemicals in below mentioned tables for preparation of 1,000 Gal recipes. Exclusion of any chemical from the recipes as mentioned in acid recipes table by any company will result in rejection of bid.

7.5% Acid Solution complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for temperature range upto 250 °F

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

7.5% Acid Solution complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for temperature range above 250 °F upto 350 °F

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

7.5% Acid Solution complete with 2,000 ppm iron control with chelating agent, 8 hrs. inhibition time for temperature range above 350 °F

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

15% ungelled acid solution complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition for temperature range upto 250 °F

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	32% HCl		Gal			
2	Chelating Agent		lbs			
3	Corrosion Inhibitor		Gal			
4	Corrosion Inhibitor Aid		Gal			
5	Diverting Agent		Gal			

6	Surfactant		Gal			
7	Water		Gal			
Recipe cost(US\$)/1,000 Gals						
Recipe cost(US\$)/Gal						

15% ungelled acid solution complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for temperature range above 250 °F upto 350 °F

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

15% ungelled acid solution complete with 2,000 ppm iron control with chelating agent, 8 hrs. inhibition for temperature range above 350 °F

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

15% gelled acid solution complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition for temperature range upto 250 °F

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

15% gelled acid solution complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for temperature range above 250 °F upto 350 °F

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

15% gelled acid solution complete with 2,000 ppm iron control with chelating agent, 8 hrs. inhibition time for temperature range above 350 °F

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

Regular Mud Acid: (12% HCl + 3% HF) c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for temperature range upto 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	Chelating Agent		lbs			
4	Corrosion Inhibitor		Gal			
5	Corrosion Inhibitor Aid		Gal			
6	Surfactant		Gal			
7	Mutual Solvent		Gal			
8	Water		Gal			
Recipe cost(US\$)/1,000 Gals						
Recipe cost(US\$)/Gal						

Regular Mud Acid: (12% HCl + 3% HF) c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for temperature range above 250 °F upto 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	Chelating Agent		lbs			

4	Corrosion Inhibitor		Gal			
5	Corrosion Inhibitor Aid		Gal			
6	Surfactant		Gal			
7	Mutual Solvent		Gal			
8	Water		Gal			
Recipe cost(US\$)/1,000 Gals						
Recipe cost(US\$)/Gal						

Regular Mud Acid: (12% HCl + 3% HF) c/w 2,000 ppm iron control with chelating agent, 8 hrs. inhibition for temperature range 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	Chelating Agent		lbs			
4	Corrosion Inhibitor		Gal			
5	Corrosion Inhibitor Aid		Gal			
6	Surfactant		Gal			
7	Mutual Solvent		Gal			
8	Water		Gal			
Recipe cost(US\$)/1,000 Gals						
Recipe cost(US\$)/Gal						

10% Acetic Acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for temperature range upto 250 °F

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

10% Acetic Acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time for temperature range above 250 °F upto 350 °F

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

10% Acetic Acid complete with 2,000 ppm iron control with chelating agent, 8 hrs. inhibition time for temperature range above 350 °F

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	Acetic Acid		Gal			
2	Chelating Agent		Ibs.			
3	Organic Corrosion Inhibitor		Gal			
4	Surfactant		Gal			
5	Water		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 temperature range upto 250 °F

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	Formic Acid		Gal			
2	Chelating Agent		Ibs.			
3	Organic Corrosion Inhibitor		Gal			
4	Surfactant		Gal			
5	Water		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 temperature range above 250 °F upto 350 °F

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	Formic Acid		Gal			
2	Chelating Agent		Ibs.			
3	Organic Corrosion Inhibitor		Gal			
4	Surfactant		Gal			
5	Water		Gal			
Recipe cost(US\$)/1,000 Gals						
Recipe cost(US\$)/Gal						

9% Formic Acid complete with 2,000 ppm iron control with chelating agent, 8 hrs. inhibition time for temperature range above 350 OF

Sr.	Product Name	Product Code	UOM	Unit Rate US\$/UOM	Qty.	Total Rate US\$
1	Formic Acid		Gal			
2	Chelating Agent		Ibs.			
3	Organic Corrosion Inhibitor		Gal			
4	Surfactant		Gal			
5	Water		Gal			
Recipe cost(US\$)/1,000 Gals						
Recipe cost(US\$)/Gal						

FINANCIAL EVALUATION MODEL

(A) Coil Tubing Services with 1.5" /1.75" /2" coil sizes (Complete setup/crew)					
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P)	Total Cost =P x Q
				US\$/ UOM	US\$
1	Coil Tubing Unit with standard BHA up to Category 3 PCE Operating Charges.	235	Days		
2	Coil Tubing Unit with standard BHA up to Category 3 PCE Standby Charges.	350	Days		
3	Coil Tubing Crew Operating Charges.	250	Days		
4	Coil Tubing Crew Standby Charges.	350	Days		
5	Coil Tubing Cumulative Depth Charges for Non-Corrosive Environment.	350,000	Meters		
6	Coil Tubing Services (Corrosive Environment CO2 ≥ 5 % or H2S ≥ 10 PPM)	105,000	Meters		
7	High Pressure Jetting / Rotating Tool Operating Charges.	60	Days		
8	High Pressure Jetting / Rotating Tool Standby Charges.	40	Days		
9	Coil Tubing Unit Mob/De-mob.	80,000	KM		
10	Coil Tubing Crew Mob/De-mob.	80,000	KM		
Total (US\$)					

(B) Nitrogen and Nitrogen pumping equipment services(Complete setup/crew)					
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P)	Total Cost =P x Q
				US\$/ UOM	US\$
1	Nitrogen Pumping Equipment Operating Charges.	235	Days		
2	Nitrogen Pumping Equipment Standby Charges.	350	Days		
3	Nitrogen Pumping Crew Operating Charges.	235	Days		
4	Nitrogen Pumping Crew Standby Charges.	350	Days		
5	Liquid Nitrogen volume Pumping Charges.	400,000	Gals		
6	Liquid Nitrogen Charges.	460,000	Gals		
7	Liquid Nitrogen Supply Tanker Standby Charges.	300	Days		
8	Liquid Nitrogen Supply Tanker Mob/De-mob.	130,000	KM		
9	Nitrogen Pumping Equipment Mob/De-mob.	80,000	KM		
10	Nitrogen Pumping Crew Mob/De-mob.	80,000	KM		
Total (US\$)					

(C) Crane with operator services(Complete setup/crew)					
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P)	Total Cost =P x Q
				US\$/ UOM	US\$
1	40-50 ton Hydraulic Crane Operating.	400	Days		
2	40-50 ton Hydraulic Crane Standby.	210	Days		
3	Crane with operator Mob/De-mob.	80,000	KM		
Total (US\$)					

(D) Pump unit services(Complete setup/crew)					
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P)	Total Cost =P x Q
				US\$/ UOM	US\$
1	Pump unit Crew Operating Charges.	60	Days		
2	Pump unit Crew Standby Charges.	40	Days		
3	Pump unit Equipment Operating Charges.	60	Days		
4	Pump unit Equipment Standby Charges.	40	Days		
5	Volume Pumping Charges using pump unit.	30,000	Gals		
6	Pump unit Equipment Mob/De-mob.	10,000	KM		
7	Pump unit crew Mob/De-mob.	10,000	KM		
Total (US\$)					

(E) Stimulation/Pumping package services (Complete setup/crew)					
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P)	Total Cost =P x Q
				US\$/ UOM	US\$
1	Stimulation/Pumping Package Crew Operating Charges.	200	Days		
2	Stimulation/Pumping Package Crew Standby Charges.	185	Days		
3	Stimulation/Pumping Package Equipment Standby Charges.	185	Days		
4	Volume Pumping Charges using stimulation/Pumping Package.	2,000,000	Gal		
5	Supply Truck for Acid Standby charges.	185	Days		
6	Stimulation/Pumping package Equipment Mob/De-mob.	60,000	KM		
7	Stimulation/Pumping Package Crew Mob/De-mob.	60,000	KM		
8	Supply Truck for Acid Mob/De-mob.	60,000	KM		
Total (US\$)					

(F) Tubing Puncture/Perforation tool including Mob/De-mob					
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P)	Total Cost =P x Q
				US\$/ UOM	US\$
1	Abbrasive/Abbrasi Jet tubing puncture/perforation tool- Operating charges.	9	Days		
2	Abbrasive/Abbrasi Jet tubing puncture/perforation tool- standby charges.	6	Days		
3	Tubular Anchors- Operating charges.	9	Days		
4	Tubular Anchors- Standby charges.	6	Days		
Total (US\$)					

(G) Thru Tubing Services with Back up Tools(Upto 2-1/8" size)					
Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P)	Total Cost =P x Q
				US\$/UOM	US\$
1	Internal/external Dimple Connector – Operating.	24	Days		
2	Internal/external Dimple Connector - Stand by.	16	Days		

3	Down hole filter – Operating.	24	Days		
4	Down hole filter -Stand By.	16	Days		
5	Thru Tubing Motor - Operating.	24	Days		
6	Thru Tubing Motor - Stand By.	16	Days		
7	Hydraulic tubing cutting tool-Operating.	24	Days		
8	Hydraulic tubing cutting tool-Standby.	16	Days		
9	Flat Bottom Mill – Operating.	24	Days		
10	Flat bottom mill - Standby.	16	Days		
11	Tapered mill –Operating.	24	Days		
12	Tapered mill - Standby.	16	Days		
13	Junk mill – Operating.	24	Days		
14	Junk mill - Standby.	16	Days		
15	Impact hammer – Operating.	24	Days		
16	Impact hammer – Standby.	16	Days		
17	Accelerator – Operating.	24	Days		
18	Accelerator - Standby.	16	Days		
19	Jar – Operating.	24	Days		
20	Jar - Standby.	16	Days		
21	Hydraulic/Mechanical Centralizer – Operating.	24	Days		
22	Hydraulic/Mechanical Centralizer - Standby.	16	Days		
23	Surface filter – Operating.	24	Days		
24	Surface filter – Standby.	16	Days		
25	Thru tubing crew – operating.	24	Days		
26	Thru tubing crew – standby.	16	Days		
27	Thru tubing tools Mob/De-mob.	40,000	KM		
28	Thru tubing crew Mob/De-mob.	40,000	KM		
Total (US\$)					

(H) Lab Analysis

Sr.	Services	Qty. (Q)	UOM (U)	Unit Cost (P)	Total Cost =P x Q
				US\$/UOM	US\$
1	Thin bed XRD analysis with minerals identification upto 1% concentration including mob/de-mob charges inside and outside Pakistan.	10	Test		

(I) Stimulation Recipes

Sr.	Description	UOM (U)	Total Estimated Quantity Required (Q)	Unit Cost (P)	Total Cost =P x Q
				US\$/UOM	US\$
1	7.5% HCl solution up to 250 °F c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time.	Gal	10,000		
2	7.5% HCl solution above 250 °F upto 350 °F c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time.	Gal	5,000		

3	7.5% HCl solution above 350 °F c/w 2,000 ppm iron control with chelating agent, 08 hrs. inhibition time.	Gal	3,000		
4	15% Gelled HCl solution upto 250 °F c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time.	Gal	20,000		
5	15% Gelled HCl solution above 250 °F upto 350 °F c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time.	Gal	10,000		
6	15% Gelled HCl solution above 350 °F c/w 2,000 ppm iron control with chelating agent, 8 hrs. inhibition time.	Gal	3,000		
7	15% ungelled HCl solution upto 250 °F c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time.	Gal	100,000		
8	15% ungelled HCl solution above 250 °F upto 350 °F c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time.	Gal	20,000		
9	15% ungelled HCl solution above 350 °F c/w 2,000 ppm iron control with chelating agent, 8 hrs. inhibition time.	Gal	3,000		
10	Regular mud acid solution upto 250 °F: (12% HCl + 3%HF) c/w 2,000ppm iron control with chelating agent, 12 hrs. inhibition time.	Gal	20,000		
11	Regular mud acid solution above 250 °F upto 350 °F: (12% HCl + 3%HF) c/w 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time.	Gal	30,000		
12	Regular mud acid solution above 350 °F: (12% HCl + 3%HF) c/w 2,000ppm iron control with chelating agent, 08 hrs. inhibition time.	Gal	3,000		
13	10% Acetic acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time upto 250 °F.	Gal	10,000		
14	10% Acetic acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time above 250 °F upto 350 °F.	Gal	5,000		
15	10% Acetic acid complete with 2,000 ppm iron control with chelating agent, 8 hrs. inhibition time above 350 °F.	Gal	3,000		
16	9% Formic acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time upto 250 °F.	Gal	10,000		
17	9% Formic acid complete with 2,000 ppm iron control with chelating agent, 12 hrs. inhibition time above 250 °F upto 350 °F.	Gal	5,000		
18	9% Formic acid complete with 2,000 ppm iron control with chelating agent, 8 hrs. inhibition time above 350 °F.	Gal	3,000		

(J) Additional Chemicals (Upto 400 °F temperature rating)					
Sr.	Description	UOM (U)	Total Estimated Quantity Required (Q)	Unit Cost (P)	Total Cost =P x Q
				US\$/UOM	US\$
1	Alcohol.	Gal	20,000		
2	Ammonium chloride.	Lbs	200,000		
3	Potassium chloride.	Lbs	200,000		
4	Soda ash.	Lbs	20,000		
5	Caustic soda.	Lbs	20,000		
6	Viscoelastic or equivalent diverter.	Gal	500		
7	Friction Reducer	Gal	1,200		
8	Xylene.	Gal	5,000		
9	Calcium carbonate.	Lbs	50,000		
10	Silica sand.	Lbs	15,000		
11	Mesh sand (30/60).	Lbs	15,000		
12	Mesh sand (20/40).	Lbs	15,000		
13	Non-damaging clean out fluid (Gel).	Gal	6,000		
14	H2S/CO2 inhibitor	Gal	200		
15	Foaming agent	Gal	200		
16	Demulsifier/Non emulsifying agent	Gal	200		
17	Anti-sludge agent	Gal	200		
18	Citric Acid	Gal	15,000		
19	H2S scavenger	Gal	200		
20	Methanol	Gal	15,000		
21	Toulene	Gal	200		
22	Calcium chloride	Lbs	25,000		
23	Sodium chloride	Lbs	25,000		
24	Acid Fiber	Lbs	500		
25	Organic acid intensifier	Lbs	1,000		
26	Clay stabilizer	Gal	300		
27	Clay acid agent	Lbs	300		
28	Stabilizing agent	Gal	1,000		
29	Friction reducer(Metal to Metal)	Gal	100		
30	Hi-Vis Pill	bbl	400		
31	32% HCl	Gal	500		
32	Chelating Agent	Lbs	200		
33	Corrosion Inhibitor	Gal	800		
34	Corrosion Inhibitor Aid	Gal	500		
35	Surfactant	Gal	200		
36	Diverting Agent	Gal	200		
37	Gelling Agent	Gal	200		
38	HF Intensifier	Lbs	50		
39	Mutual Solvent	Gal	200		
40	Acetic Acid	Gal	100		
41	Organic Corrosion Inhibitor	Gal	100		
42	Formic Acid	Gal	100		

TABLE TOTALIZER		
Table	Description	Value (US\$)
Table A	Coil tubing services	
Table B	Nitrogen and Nitrogen pumping equipment services (Complete setup/crew)	
Table C	Crane with operator services(Complete setup/crew)	
Table D	Pump unit services(Complete setup/crew)	
Table E	Stimulation/pumping package services (Complete setup/crew)	
Table F	Tubing puncture/Perforation tool including Mob/De-mob	
Table G	Thru tubing services	
Table H	Lab analysis.	
Table I	Stimulation recipes.	
Table J	Additional chemicals (Upto 400 °F temperature rating)	
GRAND TOTAL (US\$)		

Note:

- Bidder scoring lowest “Grand Total (US\$)” in table totalizer shall be declared financially lowest evaluated bidder and the contract shall be awarded to the financially lowest evaluated bidder.
- Bidder to quote same rate and same code for same temperature range chemicals mentioned at different places in tender document e.g in acid recipes’, additional chemicals list etc.
- Any additional items not covered in the table may be utilized as per published price book with 50% discount, if required, subject to approval of OGDCL Management.