OIL & GAS DEVELOPMENT COMPANY LIMITED

SERVICES/CB/DF-6400000131/2023

HIRING OF DRILLING FLUID WASTE MANAGEMENT SERVICES FOR WATER BASE MUD

ENCLOSURES:

Section A - Scope of Work.

Section B - Terms of Reference (TOR).

Section C - Technical Specifications.

Section D - Technical Evaluation Criteria.

Section E - Financial Bid format.

SCOPE OF WORK

Oil & Gas Development Company Ltd. (OGDCL) a leading exploration and production company, is desirous of acquiring Drilling Fluid Waste Management Services for Water Base Mud (WBM) for OGDCL Operated Areas in all over Pakistan through rate running contract for the duration of two years i.e 2023-2025 on as and when required basis.

The successful contractor shall supply all materials, equipment and provide the engineering /services necessary for the successful application of Waste Management Systems from drilling till drilling pit closure of wells in the most efficient and cost effective manner. As an important tool the integrated engineering approach may result in substantial reduction of operational, economic and environmental risk of the drilling/completion projects.

The successful contractor shall provide following services on as and when required basis**:**

Category #	**Description of services**
i-	Cutting Dryer & Fluid Recovery (CDFR) System,
ii-	Dewatering unit / (Coagulation, Flocculation unit).
iii-	(a) Vehicle Services: (i) Decanting or Sprinkling of Treated Water for naturally evaporation of treated water. (ii) Transportation of Water Base Drilling Fluid/Effluent/ Brine Services. (b) Mechanical Disposal of Treated Water i.e Evaporation or equivalent techniques

SECTION B:

TERMS OF REFERENCE (TOR)/INSTRUCTIONS TO BIDDERS:

Bidder shall not leave (i) any item of requirement un-answered, (ii) blank, or (iii) Will not write only yes instead of giving details of the technical and miscellaneous requirements. Compliance to above will firm the completeness of their bid.

1. The bidder should be globally recognized and well established in rendering Waste Management Services.
2. The bidder must have a full established base in Pakistan having following minimum requirement of each category, initially however, after award of contract, contractor is bound to further import the equipment as per requirement of the company. Detail of base along with no. of units of equipment of each category must be provided along with technical proposal.
   - 2.1 Minimum 1 units of CDFR comprising Hi-G dryer, auger, centrifuge, storage tank and pump etc.
   - 2.2 Minimum 4- complete set of Coagulation Flocculation Unit having Storage tank and Dewatering unit. Dewatering Unit must comprise on following unit as minimum;
     - Automated Flocculating unit
     - Flocculate settling tank
     - Transfer/feed pump
     - chemical and accessories.
   - 2.3 Minimum 6 bowsers should be available for category- iii a.
3. The bidder must have full operational workshop in Pakistan to provide the repair/ maintenance of the equipment any time during operation. Details of workshop must be provided along with the technical proposal.
4. All offered equipment should be of A-One grade (should fully comply with specifications as per Contract (evidence of compliance must be provided, including 3rd Party Calibration Certificates.
5. The quoted equipment for the job should preferably be new, not older than 08 years for category-i, ii & iii(b) and not older than 10 years for category-iii(a). For the verification of equipment age each bidder has to submit the Original Equipment Manufacturer (OEM) certificate for the confirmation of manufacturing date of the offered equipment.
6. The successful bidder will be liable to dispatch the same equipment (as per quoted) at work /job site.
7. Following certificates of offered equipment to be submitted with the technical proposal:
   - 7.1 Explosion proof Certificate of equipment where applicable. This certificate should be verifiable.
   - 7.2 OEM certificate, describing the age of equipment.
   - 7.3 Third party Load, MPI.
8. The bidder is bound to submit equipment function test / QA / QC -certificates/third party valid inspection test. Standard QMS and HSE documents with technical bid

9. All the bidders must have to provide minimum two (2) case studies of successfully implemented services Category-i, minimum five (05) case studies of successfully implemented services for category–ii and two (2) case studies of successfully implemented services category-iii & iv along with the technical proposal.

10. Each bidder should quote firm prices for equipment and services for the contract period of two (02) years. However, the contract may be extended further subject to mutual consent of both the parties and on the same rates, terms & conditions.

11. The Equipment offered by the bidders must be manufactured by the Company who has experience of at least 20 years of manufacturing for the offered and similar equipment. Confirmation to this effect is required in the technical bid.

12. The offered equipment should be compatible with Rig & its Power source (except Mechanical Disposal Unit where contractor will arrange and bear the power source & other expenses).

13. In case of Non-Compatibility of equipment with Rig & its Power source, the contractor will arrange either its own backup supply source or replace equipment which is completely in line with Rig power at contractor's account. During such period, the equipment/crew will be charged at zero rate.

14. The Contractor should abide by local regulations regarding employment and benefits for all its manpower including employees, contractors and sub-contractors. Contractor should also abide by all the relevant changes that are made effective by regulatory authorities during the course of contract, including minimum wages, etc.

15. Two (02) dedicated Technical Operators to be deployed simultaneously at Rig Site for rendering services for category-i & ii, during 24 hours of operation. One of them having 03 years relevant experience with BE or equivalent qualification or 05 years relevant experience with DAE will work as a Supervisor or Senior Operator while the second one having one year experience with DAE or 3 year relevant experience with Matriculation would work as Assistant or Junior Operator. For this Purpose, Each Bidder will submit 1-2 CVs & 4-5 CVs of Supervisors/ Senior Operator similarly 1-2 CVs and 4-5 CVs of Assistant/ Junior Operator for category -i & ii accordingly along with the technical bid.

16. The contractor will ensure the full back-up & technical support for its equipment and material used under this contract along with all necessary spares/consumable in Pakistan which will be required for smooth running of the units during operations within OGDCL.

17. Mobilization/ demobilization of personnel and equipment will be on contractor's account. OGDCL will not provide transport to operators/ personnel from nearest airport to & from well site, whereas it will be the sole responsibility of the contractor in accordance with laid down security procedure of company and/or Govt. of Pakistan i.e. security clearance/valid work visa, pick & drop etc. OGDCL will only provide boarding and lodging to contractor's personnel at rig site.

18. Contractor should have Office Support Manager / Coordinator (Base Support Manager) having relevant experience of more than 10 years (including 7-years Waste Management rig site and 3-years office base as Support Manager or Coordinator experience) and having qualification of BE (Electrical/Mechanical/ Petroleum/Chemical) or M.Sc. (Geological/ Earth/Petroleum Sciences/ technology) for technical assistance to field personnel and daily coordination and support with relevant Drilling Fluid personnel OGDCL head office, at no cost to OGDCL. Minimum one (1) no. CV of Office Support Manager/ Coordinator must be enclosed with the technical bid.

19. Contractor should also have HSE Supervisor/Coordinator having at least 7-year experience including two years as HSE Supervisors/ Coordinator experience, for monitoring the HSE measures at Rig site where services hired, to consult with company HSEQ Site Representative and at Head office as well as supervise cutting treatment and pit restoration process at no cost to OGDCL.

20. The contractor must ensure regular visits of HSE Coordinator & Office Support Manager/ Coordinator to well-site and coordinate with OGDCL Head office in order to ensure that HSEQ standards for Waste Management are being implemented in true letter and spirit.

21. Mechanical Disposal Unit (Evaporators, steam generator or equivalent techniques) should be independent from Rig source and should be able to work as mentioned at Section-C(k). Operation team should be competent enough to run and maintain the equipment.

22. The offered personnel for Waste Management Services by the contractor will meet the following requirements:

    22.1 Age Limit: The maximum allowable age limit is 55 years. (Contractor's and its subcontractor's personnel over 55 years of age must receive approval from company.

    22.2 Medical Fitness: The contractor shall ensure that all its and its subcontractor's assigned employees including heavy machinery operators and drivers are medically fit to fulfill their Drilling Fluid waste management responsibilities.

23. The designated personnel should be competent in resolving Waste Management issues and

    23.1 should be able to handle / operate all Equipment under this contract, efficiently.

    23.2 should be able to maintain the optimum parameters and ensure satisfactory Equipment efficiency.

    23.3 should have adequate H2S training.

    23.4 should have adequate HSEQ training.

    23.5 should have sound knowledge about specification of SCE, Working principle, design, operation and maintenance of Hi-G Shakers, centrifuge, agitators & Pumps, Dewatering unit. etc.

24. The bidders obtaining minimum qualifying marks in each clause as per Technical Evaluation Criteria (TEC) will be declared technically responsive subject to fulfilling all the terms and conditions/instruction to the bidders as per all enclosures.

25. Proposed Supervisors/Sr. Operators should be fluent in spoken and written English & Contractor designated staff for company should be Pakistani national (minimum 90 %).

26. The contractor would be bound to supply and install the equipment whenever & wherever required on any of rig sites of OGDCL within 48 hours with no excuse, except for convoy restrictions. in this case bidder shall reached at convoy point within 48-hours.
27. If the contractor fails to supply the equipment within the stipulated time frame, OGDCL would have the right to call for equipment/services from any alternate resources on Contractor's account.

28. Installation of the units i.e CDFR System, Dewatering, Mechanical disposal unit at Rigs will be on the contractor's account including any type of material or energy source if required.

29. Import/ Export custom clearance, custom duties, or any other cost of the contractor equipment and consumable will be at contractor's account.

30. All types of repairs and maintenance of equipment will be the contractor's responsibility including the cost of consumable and spares used.

31. OGDCL will have the discretion to hire any part of equipment i-e, CDFR unit or Centrifuge or pump only /or dewatering unit without centrifuge and without settling tank or only storage tank or only services of crew (senior/junior operator) without equipment or only Mechanical disposal unit for with Rig or without Rig operations.

32. Company has the right to inspect, audit or verify the performance of the contractor's equipment and services by itself or independent third party with/without intimation to the contractor and Contractor shall provide expertise (inspection of Equipment) to assess efficiency of already installed Equipment or yard facility under Waste Management services at well site at no cost to the company furthermore, any malfunction identified or found the equipment specification differ from bid quoted specification of equipment during the inspection/audit/verification than contractor has to rectify/replace the faulty equipment within three days otherwise Company shall make necessary corrective action and charge back its cost to the contractor.

33. API RP 13C compliance screen are mandatory. Verifiable proof of API compliance along with API of screen manufacturer must be submitted with technical bid.

34. Contractor will responsible to ensure that OEM rated load capacity which shall not be exceeded on all load lifting equipment as well as equipment should be operated and maintained as per OEM recommendation.

35. The contractor has to ensure the well site stay of their assigned Supervisors/ Operators on 30/15 days rotation basis to achieve optimum Job Efficiency and if operational constraint needs stretch in the rotation than approval from company must be acquired.

36. Contractor must have its own Training System in place. Training certificates and documents should be verifiable to Company satisfaction for offered field staff.

37. If any contractor's equipment require maintenance at well site, then contractor maintenance personnel will inform to Operation Manager/Company Man & site Drilling Fluid Engineer prior to start of maintenance work and afterwards when work is completed.

38. On site laboratory testing as well as sample collection of treated water for third party lab analysis shall be witnessed by site Drilling Fluid Engineer and Contractor shall convey the test results to site Drilling Fluid Engineer and will submit the test result at Head office. Third party lab analysis Report of samples is the sole responsibility of Contractor for all services.

39. Parameters of Treated Waste Water recovered after dewatering process and treatment should be useable in Mud mixing, washing at Mud tanks, cleaning of Rig equipment and other well site requirement.

40. For disposal purpose: if disposal sites are inland waters, sewage system or Sea as define by EPA then contractor shall ensure that treated waste (either water or cutting) parameters are under the prescribed environmentally acceptable limits of that area define by respective provincial EPA for adopted disposal procedure and make it confirm through lab analysis by Global Environmental Lab/ SGS Lab or any other reputed and approved Lab from EPA and acceptable to OGDCL. Same reports should be the part of invoices Furthermore; same lab result will also be communicated to OGDCL Head office.

41. In the compliance of OGDCL HSEQ policy, submission of quarterly NEQS test result to respective EPA and subsequent clearance for the sites where services hired from the contractor would be the sole responsibility of Contractor.

42. Contractor will select the environmentally acceptable place for sprinkling/decanting of treated water. Moreover, in case of using land for sprinkling of treated Water for naturally evaporation of treated waste, instead of road or TMA sites contractor will make an agreement with Landowner and will furnished the NOC /Agreement of no objection from Land owner with invoice. In any condition, if decanting/disposal of treated waste will cause legal repercussion by locals or any authority due to noncompliance of contract clauses or violation of regulatory authorities rules and regulation, contractor will be responsible for settling the legal issues. OGDCL may constitute fact finding committee(FFC) for confirmation of violation/ noncompliance. If FFC–recommendations prove the charge, contractor may be penalized with up to USD 4,000/- per incident from any invoice of that contract. In case of repeat offence on same well, OGDCL reserves the right to double the penalty.

43. Contractor shall conclude the treated water disposal/sprinkling operation with the completion of Drilling activities or maximum before Relieving of Mud Engineer to avoid subsequent constrains of verification/invoicing.

44. The contractor shall conduct and submit a post job waste management evaluation report after each well and suggest/advise the Company on technique and suggestions / lesson learnt for improvement in Drilling Fluid Waste Management.

45. The post job evaluation report shall include but not be limited to CDFR reports, Dewatering report, detailed report of category -iii (a and b) job and category-iv job along with the site HSEQ activity report as per nature of job completed which should be submitted within one (1) week after completion of job.

46. The contractor should install safety/warning sign boards when received the call for system/unit installation, with the consultation of company site HSEQ and CESS representative, at suitable places where required.

47. The contractor will provide and ensure the use of life saving PPEs for their site /field personnel during waste management services.

48. The contractor shall provide 2000 hours training on Solids Control & Oil field Drilling Waste Management to Company's professionals in two year of the contract duration.

49. Contractor's staff shall be responsible for conveying the site waste management operation sequences and HSE meeting/measures in timely manner to site Drilling Fluid Engineer for daily reporting of waste management in Daily morning signal.

50. No reimbursement/payment will be made for work/job which is not performing in accordance with the contract or leave incomplete.

51. The payment, to Contractor, will be made as per draft contract Section - 04.

52. All the no. of days/quantities given in finance Bid Formats in tender documents are for evaluation purpose only. However, the payment will be made as per actual usage of component / parts of units, & services of the personnel for the operational mentioned categories and stand by number of days after verification

53. of invoices from site Drilling Fluid Engineer, Operation Manager/ Company Man and Drilling Fluid Department, Head office, OGDCL.

54. No payment will be made for shut down period during which any repair/ maintenance would be made by contractor on location or any job which were left incomplete.

55. The invoices shall be complete duly supported by daily activity reports of each job performed on same pattern of Request for Quotation(RFQ) along with one-page summary sheet, initially verified by site Drilling Fluid Engineer and Company Man. Separate invoices be submitted for each category services performed.

56. If any of the information provided by the bidders proves wrong or a counterfeited/ illegitimate document is submitted to mislead department, OGDCL reserves the right to disqualify such bids without assigning any reason. Such bidders will not be allowed to bid for any future procurement/Service Outsourcing.

57. The case will be processed on total lump sum cost Basis.

TECHNICAL SPECIFICATIONS

Each bidder should conform to the required technical specifications & should fill-in the given tables with the exact value of these parameters of their quoted equipment/Product.

CUTTING DRYER FLUID RECOVERY (CDFR) SYSTEM:

CDFR referred to Cuttings Drying Fluid Recovery system, must comprise of the following equipment but not limited to these

- Auger or Screw Conveyor
- High G Shaker
- 10 bbl Mud Holding Tank
- Centrifuge
- 100 bbl. recovery tank
- Mud Transfer Pumps, Piping & Valves, Positive displacement pump and consumables, screens and accessories required for running of the system

This CDFR system specified as under is required for Water Based Mud (WBM) system on daily rental basis. The Fluid Recovered through CDFR System must not be exceeding in LGS concentration comparing to the prevailing active mud system. Company may advice to keep the concentration of LGS lower in recovered fluid prior to return in the active system. Company has right to witness/monitor the LGS concentration in Recovered Fluid of CDFR system. The Bidders are required to comply with CDFR requirements as per the specifications of each components as given below:

A: Transport of Cuttings - Augur

i. Augur (Conveyor spiral Screw) for transfer of cuttings should have capacity to transfers 40-60 tons/hour.
ii. Variable Auger length as per requirement of operation/place.
iii. The Auger size 14”-16” diameter.
iv. Date of Manufacturer should not be older than 05 years
v. Explosion proof-Minimum Class 1 and Division 1 rated
vi. Installation power 10 HP (minimum).
vii. Variable speed gear 10- 60 rpm.

B: High G Shaker
(DERRICK FLOW LINE CLEANER 2000 OR MANGOOSE PRO-SHAKER / MUD CLEANER OR EQUIVALENT)

i. Date of Manufacturer should not be older than 05 years. In case of an older unit being offered then the OEM certificate would clearly state that the offered unit is fit for purpose.in any case the offered unit should not be more than 08 years old.
ii. Shaker motor should be Explosion Proof-Minimum Class 1 and Division 1 rated, according to standard IP56.
iii. Compatible with rig electric supply, Volts, Hertz (460 V, 60 Hz or 380 V 50 Hz) etc.
iv. Should be able to handle 600 GPM of 10-12 PPG, 20 PV and 14 YP mud through API-170 Screens.
v. Having provision of installation of all type API screens.
vi. Hi-G dryer platform shall be fitted with safety features likewise but not limited up to non-skidding flooring, hand rails and anchorage points where necessary.

vii. Super G VIBRATING MOTORS:

a) Linear Motion G force up to 8.0 G to meet more application.
b) "Greased-for-life" bearing system reduces repair and maintenance costs.
c) Sound output may be 81 dBA or less.

viii. Deck angle adjustment:

a) Deck angle of the shale shaker should be adjustable while drilling.
b) Quick raising and lowering of the screen basket from -2° to +8°.on the 4-panel.
c) Optimization of shaker performance without operation interruption

ix. PYRAMID TM SCREENS:

a) Minimum four panels and screening area 25 sq. ft. as per API Standard RP13C.
b) Fluid handling capacity up to 125 % as per API RP-13C
c) Allow use of finer mesh sizes at higher capacities.

x. SCREEN UNDERFLOW SUMP:

a) High volume sumps must have a slanted floor to the optional Victaulic nipples for easy clean out.
b) 4-panel must have10-barrel capacity.
c) The construction/design of holding tank must have built-in support for cleaning & draining of underflow.
d) 3rd Party MPI (Magnetic Particle Inspection) of holding is mandatory.

C: <u>Holding Tank for Returned WBM (Sump Used Underneath Shaker / Hi-G Dryer)</u>

i. Date of Manufacturing should not be older than 05 years. In case of an older unit being offered then the OEM certificate would clearly state that the offered unit is fit for purpose.in any case the offered unit should not be more than 08 years old.
ii. Mud collection sump should have minimum 10 bbl of holding capacity for recovery tank it should be 100 bbl.
iii. Sump should be perfectly matched with shaker/Hi-G dryer type used over it.
iv. Construction and design shall be having cleaning and draining built in provisions.
v. 6 mm wall thickness(minimum).
vi. Third party MPI and Load test are compulsory.

D: <u>Centrifuge (FHD/VFD)</u>:

<u>SPECIFICATION FOR VARIABLE FREQUENCY/ VARIABLE SPEED, HIGH VOLUME DECANTING CENTRIFUGE (Derrick DE-1000 FHD, MI Swaco CD-500 FHD, Alfa Laval Lynx 300, Brandt HS-3400 FHD OR EQUIVALENT CENTRIFUGE FROM REPUTABLE COMPANIES WHO HAVE BEEN MANUFACTURING CENTRIFUGES FOR THE LAST 20 YEARS WILL BE ACCEPTABLE)</u>

Dedicated Fully Hydraulic/Variable frequency Drive centrifuge with variable bowl/conveyer differential having following technical specifications. Centrifuge should be having variable speed and able to remove low gravity and fine solids.

i. Bowl drive variable speed from ½ rpm to 3400 rpm.
ii. Scroll drive variable speed from 3 rpm to 90 rpm.
iii. Independently adjustable bowl and conveyor differential speed.

iv. Fluid intake capacity upto 200 GPM (minimum).
v. G- force should not be less than 2300.
vi. Should ex-proof certificate and other specs must be match with rig electric system.
vii. Automatic Shutdown at Excessive Torque, overheated hydraulic fluid and excessive Vibration. days
viii. Date of Manufacturing should not be older than 05 years. In case of an older unit being offered then the OEM certificate would clearly state that the offered unit is fit for purpose.in any case the offered unit should not be more than 08 years old.

E. Transfer Pumps- Recovered Mud to Mud Tanks:

i. Pump use for transferring recovered WBM must be skid mounted and having power to transfer the weighted Mud.
ii. In case of an older unit being offered then the OEM certificate would clearly state that the offered unit is fit for purpose.in any case the offered unit should not be more than 08 years old. In case of an older unit being offered then the OEM certificate would clearly state that the offered unit is fit for purpose.in any case the offered unit should not be more than 08 years' old
iii. Pump should be compatible to Rig flow system.
iv. Corresponding suction & discharge lines may be connected to respective Active & reserve system.
v. Must be compatible with rig power system 380/50 or 460/60
vi. Centrifugal pump should be equipped with mechanical seals.
vii. OEM manufacturing/Purchase certificate (verifiable) bearing OEM serial number and date of manufacturing shall be provided along with the technical proposal.

F - Piping & Valves:

i. Date of Manufacturer should not be older than 05 years. In case of an older unit being offered then the OEM certificate would clearly state that the offered unit is fit for purpose.in any case the offered unit should not be more than 08 years old.

G- Hi G Shaker Screen:

i. Screen specifications should be offered as per screen standard API RP 13-C.

ii. Screens size should be suitable to get maximum recovery. Contractor may also use screen size equal or greater than size being used at shale shaker as per requirement.

H: Centrifuge Feed Pump:

Feed pump will be used for dedicated centrifuge. Feed pump should be a positive displacement type progressive cavity pump. Speed and flow rate able to control according to the centrifuge processing requirements and must be having ex-proof certificate and compatible with all type of viscous fluid.

Summary for minimum requirement:

Sr. No.	Description	Minimum Standard Required	Bidders Response
Shakers / Hi-G dryer			
1	Vibrator motors	Fully explosion proof IP 56	
2	Hi G Motion	Linear	
3	G Force	7(as minimum)	
4	Screens Quality	4	
5	Screen (Deck) angle	Adjustable angle (minimum) 0 to +5	
6	Corrosion Prevention	Zinc/Primer Coated	
7	Volts/Frequency	380/460 volts & 50/60Hz	
8	Phase	3	
9	Holding tank 10 bbl.	Holding tank fitted underneath of the HI-G dryer shall be having the capacity of minimum 10 bbl.	
10	Shakers Screen	Must be compliant with API RP 13C. Higher Conductance screens will only be acceptable	
11	Availability of Screens	All sizes of screens required for CDFR operations must be available	
Augur- Spiral Conveyor Screw			
12	Capacity	40 ton/hr	
13	Length	Variable Auger length as per requirement.	
14	Size	14”-16” diameter.	
15	Installation power	10 HP (minimum)	
16	Gear Box	Only Variable Speed Gear Box will be acceptable for the Auger	
17	Variable speed gear	10- 60 rpm.	
Centrifuge Specifications			
18	Make	Derrick (DE-1000FHD) BRANDT (HS-3400) OR EQUIVALENT Fully Hydraulic Drive	
19	Bowl size	14 inch	
20	G – Force	2300	
21	Capacity	50 GPM -200GPM	
22	Type	Variable Speed	
23	Bowl drive	50HP minimum	
24	Volts	380/460 & 50/60	
25	Emergency/Safety provisions	Automatic Shutdown at Excessive Torque, overheated hydraulic fluid and excessive Vibration	
26	Electrical Safety	Ex-Proof certificate	
Centrifuge Feed Pump			
27	Motor	15 HP minimum	
28	Type	Positive displacement, progressive cavity type	
29	Flow rate	Variable, flow rate must be able to controlled 20-200 gpm.	
30	Electrical Safety	Must be ex-proof Certificate	
100 bbl. recovered mud storage tank			
31	Construction	Should be compatible to the system.	
32	Designing	In-built provisions for centrifuge installations	
33	Thickness	6mm wall thickness	
34	Certification	MPI & Load certificate is required.	

I: COAGULATION, FLOCCULATION UNIT (Dewatering) FOR PURIFICATION OF MUD PITS EFFLUENT:

OGDCL intended to use Dewatering unit or Coagulation, Flocculation Unit to ensure the compliance of regulations to save the environmental and reuse of waste water from water base mud pits. Dewatering unit having coagulation, flocculation and dilution units, manifold controlled injection of polymer and chemicals like pH reducer having capacity of 400 to 500 bbl per batch. This system will comprise following part but not limited to these.

- Dewatering Unit Including following as minimum
    - ISO standard multi compartment Chemical mixing unit/Automated flocculating unit.
    - Floc Settling tank should have capacity of 400 to 500 bbl of one batch.
    - Transfer pump.
    - Dosing pumps/ Agitators/manifold.
    - Chemicals.
    - Any other equipment/part required for running of the system

- Mobile field lab
- 100 bbl storage tank.

TECHNICAL SPECIFICATION OF COAGULATION, FLOCCULATION UNIT

In Dewatering System coagulants and flocculants technology will be used to make the ultrafine particles (≤2microns) aggregate into large mass, then separated for reuse. The treated water should be used for mud mixing, washing at mud tanks, cooling of Rig equipment and dust suppression at site. Flocculation shall be considered combination of chemical agglomeration and mechanical separation.

i. Offered system Should have 1200 bbl to 1500 bbl per day capacity of processing of waste water.
ii. Should be a compact unit, Pre-mixing, processing, settling tanks must be isolated in function but interconnected with each other while settling of flocs tank/tanks should have carrying capacity of 400 to 500 bbl /batch to meet the enhanced requirement.
iii. Mobile Water Sample Testing Lab should be capable for necessary rapid test for checking impurities i.e testing pH, turbidity, hardness etc.
iv. 01 No pump for shifting of waste water / treated water.
v. Coagulants: Metal Salt (Aluminum Sulphate).
vi. Flocculants: Cationic Polymer, partially hydrolyzed polyacrylamide, Sodium Alginate & Sodium, Calcium Hypochlorite, each chemical mixing tank shall be fitted with agitator.
vii. Each chemical section will be having two dosing pumps i.e. one is operational and one standby.
viii. The unit and process must be compatible with high to low pH range of waste water.
ix. All specs will be furnished with drawing/proof of evidences.
x. Contractor has to follow applicable environmental regulations i.e Environmental Quality Standards(EQS)of operating area for disposal of treated waste strictly either by treated mechanically, chemically or by approved /define limit of dilution.
xi. Contractor will select the environmentally acceptable place for sprinkling/decanting of treated water. Moreover, in case of using land for

sprinkling of treated Water for naturally evaporation of treated waste, instead of road or TMA sites contractor will make an agreement with Landowner and will furnished the NOC /Agreement of no objection from Land owner with invoice. In any condition, if decanting/disposal of treated waste will cause legal repercussion by locals or any authority due to noncompliance of contract clauses or regulatory authorities rules and regulation, contractor will be responsible for settling the legal issues.

xii. Contractor has to ensure that no treated waste discharged on to the agriculture/cultivate land surface or into natural water body i.e river, lakes, stream, canals, waterways, inlets bays or any water system to avoid the chances of environment damage/harm.

xiii. If contractor necessarily required to disposed off the treated waste on below mentioned places i.e inland waters or sewage, provincial EPA compliance third party approved Lab Report must be submitted to Head office and will make it the part of invoice case file. (Unit of measures is mg/l, unless otherwise define):

Water Parameters	pH	TDS	TSS	Chlorides	Oil & Grease	Phenolic Compound	BOD5	COD
Acceptable Range	6-9	3500	200*/400**	1000	10	0.1*/0.3**	80*/250**	150*/400**

* if discharged into inland waters
** if discharge into sewage system

xiv. OGDLC has right to ask for third party independent laboratory testing by contractors own cost for those parameters cannot be tested in field laboratory.

xv. Recycled/processed water should be useable in Mud mixing, washing at Mud tanks, cleaning of Rig equipment and other well site requirement.

xvi. Date of Manufacturing should not be older than 05 years. In case of an older unit being offered then the OEM certificate would clearly state that the offered unit is fit for purpose.in any case the offered unit should not be more than 08 years old.

COAGULATION, FLOCCULATION UNIT:

Sr. No.	Description	Required Specifications	Offered Specifications
1	Containerized Dewatering unit or coagulation/ flocculation unit with floc settling tank capacity of 400 to 500 bbl per batch	Processing capacity must be 1200-1500 bbl/day	
2	Construction of unit	containerized automated unit (Two end and one entrance door. C/W floor drain. Non- slip walk way. Electric fan.	
3	Unit Comprising (At least)	1 x Flocculent make up tank. 1 x Coagulant make up tank. 1 processed water tank/ dilution tank etc. Compatible to the offered system.	
4	No of Pumps	2 dosing pumps for flocculants (1 standby) 2 dosing pumps for coagulant (1 standby) 1 feeding pump for transferred treated water .	
5	Mixing System	Compatible to the offered Tank systems.	
6	Cleaning/decanting	Each compartment should have provision of cleaning gate	
7	Electrical compatibility	Voltage 380/460 Phase 3 Frequency 50/60 Hz	
8	Size and dimension	Able to mobilize with 40/20 ft. trailer	
9	Electrical Safety	Must be ex-proof Certificate	
10	Site lab container	capable of testing Ph, Turbidity, TSS, TDS, Temperature, Chloride, Sulfate etc	
11	Chemicals used	List of chemicals used should be attached within technical proposal	
	100 bbl Storage Tank		
1	Construction	Should be compatible to the system.	
2	Designing	In-built provisions for centrifuge installations.	
3	Certification	QA/QC document, MPI & Load certificate are required.	
4	Thickness	6mm wall thickness(minimum).	

J: VEHICLE SERVICES:

(A) DECANTING/SPRINKLING OF TREATED WATER SERVICES FOR NATURALLY EVAPORATION OF TREATED WASTE.

(B) TRANSPORTATION OF WATER BASE/DRILLING FLUID/EFFLUENT/ BRINE.

Water base Mud or Brine would be transferred from one define location to other advised location through bowsers on per bbl per km basis. However, the payment will be made as per actual; considering the total mud volume shifted and distance covered from one location to reach till other location. For invoicing purpose, the shortest distance between two locations will be considered.

While treated waste water/fluids /effluent would be collected from the designate pits through Waste Water Bowser with following technical specifications and extra treated water will only be sprinkled at environmentally accepted locations on per barrel basis for naturally evaporation of treated waste. In case the bidder/contractor will use TMA site for disposal of treated wastewater, the contractor shall submit NOC/approval from TMA for treated effluent disposed at TMA designated site. In case the contractor uses private land for sprinkling of treated water then contractor will provide the agreement/NOC from land owner for sprinkling/decanting of treated waste with invoice.

i. Transportation of Drilling fluid will be based on 60 bbl bowser per 100 km (for evaluation purpose only) while decanting/sprinkling services will be based on per barrel sprinkling basis (for evaluation purpose only).
ii. Truck mounted bowsers capable to dispose minimum 500-700 bbls treated water per day.
iii. Level Gauge is mandatory
iv. Bowsers should not older than 10 years furthermore its emissions must be complying with NEQS requirements.
v. Bowser must be multi comparted and double axel type for hilly areas.
vi. The Bowser must have to be fitted with pump capable of suction/ decanting of fluids with up to fluid SG 2.20.
vii. The bowsers must be fitted with 60-80 ft. of Hose Pipe for proposed suction and decanting purpose.
viii. Necessary spares of bowsers and pump must be available with vehicle.
ix. Bowser must be equipped with seat belts and spark arrestor.
x. Preventive Maintenance (PM) Plan of vehicle and pump maintenance must be available.
xi. Contractor is bound to submit MPI certificate of 5th pin of vehicles after every six months.

K: MECHANICAL DISPOSAL OF TREATED WATER BY EVAPORATION OR EQUIVALENT TECHNIQUES.

OGDCL is desirous for mechanical disposal of treated water either using evaporator, steam generator or equivalent technique to keep the environment safe at maximum extent. each bidder will offer their equipment/technique to meet following requirement:

S.#.	**Description**	**Required Specifications**	**Offered Specifications**
1.	Processing capacity	Processing capacity must be minimum 500 bbl/day with minimal waste to be disposed of.	
2.	Age of equipment	Equipment age must not be older than 05 years. Bidder have to submits its OEM Certificate, Inspection, PMI, and Emission Certificate along with technical Bid.	
3.	Construction of unit	Should be independent and complete set to run the operation, proof of conforming ASTM/ASME and ANSI/ISO (where applicable) are required with the technical bids.	
4.	Size and dimension	Should be easy to move (20'/40' feet container) and installed, skid mounted	
5.	Electrical Safety	Must be ex-proof Certificate.	
6.	Emission & Sound	Equipment should be environmental friendly. Sound output may be less than 81 dBA. Emission should be under EPA limits.	
7.	Reliability of efficiency	Should be able to work in all weather conditions of South, Center and North region .bidder will must be confirm this effect in technical bid with OEM papers/certificate.	

SECTION D:

TECHNICAL EVALUATION CRITERIA

Evaluation of the bids will be based on following:

i) Submission of bids in compliance with general tendering instructions

ii) Conformity of Technical bids with all enclosures A to E.

iii) OGDCL may acquire the services on as and when required basis.

iv) Technical evaluation as per the criteria of Qualifying marking system for each category.

v) Commercial / Financial evaluation of technically qualified contractors as per Financial Bid Format.

Technically qualified and commercially lowest bidder meeting respective criteria will be selected, subject to the acceptance of all OGDCL terms and conditions of the contract.

Note: Evaluation criteria will be full package wise for the below serial of services:

Category #	**Description of services**
i.	Cutting Dryer & Fluid Recovery (CDFR) System.
ii.	Dewatering unit / (Coagulation, Flocculation unit).
iii.	(a) Vehicle Services: (iii) Decanting or Sprinkling Disposal of Treated Water. (iv) Transportation of Water Base Drilling Fluid/Effluent/ Brine Services. (b) Mechanical Disposal of Treated Water i.e Evaporation or equivalent techniques.

TECHNICAL EVALUATION:

DISTRIBUTION OF MARKS FOR FULL PACKAGE OF

SERVICES FOR CATEGORY i – iii

S. No	Tender Requirement	Maximum Marks	Minimum Qualifying Marks	Obtaining Marks
1	Key Acceptance Criteria (Mandatory)	(Mandatory)	(Conforming)	(Conforming)
2	Equipment	50	39.59	
3	Personnel	30	23.68	
4	HSEQ	20	15.0	
RESULT		RESPONSIVE/NON RESPONSIVE		

DETAIL OF DISTRIBUTION OF MARKS:

S.NO.		TECHNICAL CRITERIA	Maximum allotted points	Minimum qualifying points
1		Key Acceptance Criteria	**Mandatory**	
2	Points Distribution	Equipment	293 points (equal to 50 Marks)	232 points (equal to 39.59 Marks)
		Personnel	76 points (equal to 30 Marks)	60 points (equal to 23.68 Marks)
		HSEQ	200 points (equal to 20 Marks)	150 points (equal to 15.0 Marks)

Note:

- Bidders must qualify Key Acceptance Criteria to be considered for detailed technical evaluation

- Bidders are required to Score the minimum point required for each category. The Tables are provided in the following pages

- Minimum Qualifying Score is mentioned in each category.

1. KEY ACCEPTANCE CRITERIA (MANDATORY)

1.1	For services of category i-iv : In case of award of Contract, Contractor must agree to perform Services in all OGDCL Operated Areas in Pakistan with at-least 5-6 parallel operational sites including but not limited to Baluchistan and Khyber Pakhtunkhwa.	**Mandatory**	**Bidder's response**
1.2	Bidder must be an established exclusive and independent Services provider with at least 5 Years of waste management experience with E&P companies. Bidder will have to submit the proof of providing the above mentioned each category services to other E & P companies during the recent past 5 years. 1 case study of successfully implemented service of category(i), Five (5) case studies of successfully implemented services for category-ii & iii (a) record must be provided with the technical proposal.	**Mandatory**	
1.3	The Equipment offered by the Bidders must be manufactured by the Company who has experience of at least 20 years of manufacturing for the offered and similar equipment i.e shaker, Auger Centrifuge, pumps, screens, dewatering units, mechanical disposal units and every equipment includes in contract. Confirmation to this effect is required in the technical bid.	**Mandatory**	
1.4	The bidder must have a full established base in Pakistan having minimum requirement of each category initially as mentioned in TOR however, after award of contract, contractor is bound to further import the equipment as per requirement of the company.	**Mandatory**	
1.5	Specifications sheets along with drawings for all the quoted equipment must be provided along with the Technical bid.	**Mandatory**	
1.6	Contractor shall have base office in Pakistan with complete support services including operational workshop with redressing facility, warehouse & logistic base / support and sizeable stock of the required standard spares, handling equipment and consumables etc. (Note: documentary evidences and pictures to be provided with the bid).	**Mandatory**	
1.7	Contractor must be agreed to send Equipment along with consumables and Staff mobilization on field location within 48 Hours after Mobilization notice. except for convoy restrictions. in this case bidder shall reached at convoy point within 48-hours.	**Mandatory**	
1.8	The bidder will ensure the full back-up support for its equipment along with all necessary spares/consumable in Pakistan which will be required for smooth running of the units during operations within OGDCL.	**Mandatory**	

1.9	Contractor must have its own Training System in place. Training Calendar and Relevant record/proof of compliance for last two (2) year should be submitted along with bid documents. Note: Training certificates and documents should be verifiable to Company satisfaction for offered field staff Engineers/supervisors /operators/ drivers for OGDCL Field operations.	**Mandatory**	
1.10	Contractor's all equipment for (categories I to III) must be accompanied with valid inspection certificates / calibration certificates, OEM certificate which describing the age of equipment EX-proof Certificate, third party Load, MPI and maintenance certificate where applicable, are required to submit along the technical proposal and equipment shall meet applicable API specifications and relevant internationally acceptable standards.	**Mandatory**	
1.11	All offered personnel, office based and field based, must comply the conditions i.e minimum qualifications, experience ,medical fitness ,age etc as specified in TOR .	**Mandatory**	
1.12	Bidder must have to maintain at least 90% Pakistani staff both on field and support office based staff during the term of contract.	**Mandatory**	
1.13	For CDFRS, verifiable proof of API RP-13C (ISO13501) compliance is required for screen. Explosion proof Certificate for parts/equipment of CDFRS should be enclosed where applicable. This certificate should be verifiable. OEM certificate reflects the age of equipment and Third Party Load, MPI certificate to be submitted with the technical proposal. Equipment should preferably be new, not older than 8 years.	**Mandatory**	
1.14	Coagulation, Flocculation Unit including dewatering unit as define in TOR including ancillary equipment must not be older than 8 years. treated water must be usable for mud mixing, washing at mud tanks, cooling of rig equipment and dust suppression at site. Bidder to submit equipment OEM certificates. Set of complete equipment for subject service as mentioned in technical specification of flocculation unit is mandatory.	**Mandatory**	

1.15	For vehicle services, equipment must not be older than 10 years. Submission of pump and bowsers fitness and emission certificates as well as third party load, MPI and bowser registration certificate to be submitted with the technical proposal. Contractor is bound to submit MPI certificate of 5th pin of vehicles after every six months. Bidder to submit equipment age verifiable certificates. Bowsers must be capable to handle mud above 2.2 SG. Bowser tanks must be double walled and multi comparted. For mechanical disposal of treated water Equipment age must not be older than 05 years. Bidder have to submits its OEM Certificate Inspection, PMI, Emission Certificate along with technical proposal. however complete set of equipment, conforming all aspects as mentioned in technical specification is mandatory.	**Mandatory**	
1.16	Set of complete equipment along with consumables for services of each category (at least but not limited to as mentioned in technical specification) is mandatory to run/execute the job successfully.	**Mandatory**	
1.17	Bidder will must provide the detail of offered Equipment for Mechanical disposal unit as specified in TOR along with bid and ensure the provision of equipment alongwith services within stipulated period mentioned in order email. Confirmation Certificate also required from Regional Manager or equivalent post authority	**Mandatory**	

2. POINT DISTRIBUTION:(Items marked with an asterisk '*' are minimum mandatory requirement)

2.1 EQUIPMENT:

Sr. No.	Description	Maximum Score	Obtained Score
Hi G Shakers & Screens			
2.1.1	Hi G shaker "G" force => 8	10	
	Shale shaker "G" force =>7 & <8.0	5	
2.1.2	* Min Shaker's Panels required = 04	5	
2.1.3	* Minimum flow handling capacity of 600 GPM with 10 PPG Mud having [20 PV and 14 YP] over API 170 screens & having provision of installation of all type API screens including pyramid type.	10	
2.1.4	Screening area as per API – RP13C =>25 sq. ft & above	10	
	Screening area API- RP13C =>20 & <25 sq. ft	5	

Sr. No.	Description	Maximum Score	Obtained Score
2.1.5	Corrosion resistance coating for corrosion prevention.	5	
2.1.6	Deck angle should be adjustable 8° uphill to -2° downhill (Adjustable angle) to deal with all drilling conditions.	12	
	Deck angle should be adjustable 7° uphill to -1° downhill (Adjustable angle) to deal with all drilling conditions.	8	
	*Deck angle should be adjustable 5° uphill to -0° downhill (Adjustable angle) to deal with all drilling conditions.	5	
2.1.7	* Compatible with rig electric supply, Volts, Hertz (460 V, 60 Hz or 380 V 50 Hz) etc.	5	
2.1.8	* hi G Shaker Screens complying with ISO13501 and API RP13C.	5	
2.1.9	* All required API compliant screen sizes provided.	5	
2.1.10	The age of offered units/ equipment is:		
	=<3 years	10	
	>3 & =<5 years	8	
	* >5years and =8 years	5	
2.1.11	**Augur**		
	Capaciry “>50Ton	10	
	*Capaciry “40-50Ton	5	
2.1.12	Size=16” diameter	10	
	*Diameter=14”	5	
2.1.13	*Installation power 10 HP (minimum)	5	
2.1.14	*Variable speed gear	5	
2.1.15	* Auger must be fitted with all safety features likewise but not limited up to emergency stop switch; grating that covers the moving part inside and safety grab line.	5	
	Centrifuges		
2.1.16	* The offered units will have OEM certificates to prove compliance with the below listed minimum parameter’s	10	
	• 14 inch bowl diameter.		
	• Bowl Drive – Variable speed hydraulic (1/2 RPM – 3400 RPM).		
	• Scroll Drive – Variable speed Hydraulic (3 RPM – 90 RPM differential speed)		
	• Operating Temperature Range [-10 C to 50 C]		
2.1.17	The age of offered units/ equipment is:		
	<3 years	10	
	>3 & =or <5 years	8	
	* >5years and =8 years	5	

Sr. No.	Description	Maximum Score	Obtained Score
2.1.18	* The centrifuge skids provided will comply with oil field specifications and will have all lifting and welding certificates in provisions to meet the HSE requirements and certificates (load and MPI) to be submitted before mobilization of the equipment.	5	
2.1.19	* Low Speed (Variable) centrifuge for recovery of barite and high speed (Variable) Centrifuge for removal of low gravity solids.	14	
	• Independently adjustable bowl and conveyor differential speed		
	• Explosion proof control panel & safety shut down devices should be built in.		
	• Automatic speed boost of scroll to prevent overloading		
	• Stainless steel rotating assembly.		
	• G Force minimum 2300 G's		
	• Automatic unit shut down under the following circumstances:		
	• Excessive torque		
	• Overheated hydraulic fluid		
	• Excessive vibration		
2.1.20	* Flange connection of the pump meets the standard DIN/ANSI.	5	
2.1.21	* Rental units with dual voltage systems (380/ 50 and 460/60) will be acceptable	5	
2.1.22	*Feed pump must have pulsation and controlled flow rate. - Variable Speed, Progressive Cavity Pump having positive displacement (20-200 GPM), certified of explosion proof and not older than 8 years.	5	
	Sump/storage tanks.		
2.1.23	* Sump fitted underneath of the Hi-G dryer shall have the capacity 10 bbl at minimum & Recovery and storage tank capacity should be 100 bbl, with wall thickness is 6mm.	5	
	Feed pump		
2.1.24	* The feed pump is providing for the centrifuge shall be a positive displacement (rotor stator type) pump. Centrifugal pump shall be using for fluid transfer must be having capacity 15 HP at minimum.	5	
Containerized coagulation, flocculation unit including Dewatering unit having floc settling tank capacity 400 bbl to 500 bbl per batch.		14	
2.1.25	Two end and one entrance door. C/W floor drain. Non- slip walk way. Electric fan.		
	2 dosing pumps for flocculants (1 standby)		

Sr. No.	Description	Maximum Score	Obtained Score
	2 dosing pumps for coagulant (1 standby) 1 pump for shifting of treated water.		
	Multi comparted unit comprising atleast but not limited to=1 x flocculent make up tank, 1 x coagulant make up tank. dilution tank ,1 processed water tank etc. manifold should compatible to the offered system.		
	each compartment should have provision of cleaning gate		
	Pre-mixing, processing and recycling tank must be fitting with agitating system.		
	electrical compatibility= voltage 380/460,phase 3,frequency 50/60 hz		
	Site lab container should be capable of testing ph, Turbidity, TSS, TDS, Temperature, Chloride, Sulfate etc		
2.1.26	Chemicals used for bulk flocculation must be environmental friendly. MSDS of proposed chemical to be attached with bidders technical proposal	5	
2.1.29	*Processing capacity must be 1200-1500 bbl/day	10	
	Processing capacity >1500 bbl	15	
2.1.30	Age of equipment 6 to 8 years	8	
	=5 to 4 year	12	
	<3 years	16	
Vehicle Services			
2.1.31	*Bowser should be leak proof, fitted double valves on discharge end and having provision of isolation. . Transfer pump should be available for shifting of fluid into Bowser	5	
2.1.32	*Bowser tanks must be double walled and multi comparted. furthermore its emissions complying with NEQS requirements	5	
2.1.33	Bowsers should not older than 10 year	6	
	Bowsers are 07 year old	9	
	Bowsers are = or <05 year	12	
Mechanical disposal of Treated Water			
2.1.34	Processing capacity must be 500 bbl/day with minimal waste to be disposed of.		
	800bbl and above	15	
	600bbl to 799bbl	13	

Sr. No.	Description	Maximum Score	Obtained Score
	*500bbl	10	
2.1.35	The age of offered units/ equipment is:		
	= or <3 years	15	
	>3 and </=5 years	13	
	*6 to8 years	10	
2.1.36	*Sound output & Emission should be under EPA limits	10	
2.1.37	*Must be able to work in all weather conditions of South, Center and North region.	5	
Maximum points/Minimum qualifying points		**293/232**	

2.2 PERSONNEL

Bidder will provide the skilled staff at its expenses and under its exclusive responsibility to perform the Drilling fluid waste management services.

Sr. No.	Description	Maximum points	Obtained points
2.2.1	* Bidder to confirm to assigned qualified, experienced and competent manpower for carrying out the solid control equipment maintenance and other associated operations as per contract.	5	
2.2.2	*For CDFRS + Dewatering unit ,CVs of 5 No. (i-e, 1+4 nos for each category accordingly) Solids Control Supervisor / Senior operators (1 points for each).	5	
	CVs of 10 No. & above Solids Control Supervisor/Senior operators (addition of 0.5 for each)	7.5	
2.2.3	*For CDFRS + Dewatering unit ,CVs of at least 5 no.s (i.e 1+4 each category) junior Operators	5	
	CVs of 10 and above junior Operators (addition of 0.5 for each)	7.5	
2.2.4	*Solids Control Supervisor / Operator should be BE or equivalent with at least 3 year relevant experience or should be DAE with atleast 5 year on-hand recent experience with competency in running solids Control equipment. Designated engineer should be capable of running all Solids Control Equipment. He should have high competency and knowledge in dealing with Solids Control Equipment (SCE) and related services as per contract.(for 1+ 4 no. personnel minimum requirement , for each category i and ii(one point for each)	5	

Sr. No.	Description	Maximum points	Obtained points
	if on hand recent experience is 5 year or more as BE or 7 year or more relevant experience as DAE than additional 1/2 point will be given for each Personnel.	7.5	
2.2.5	*Solids Control junior operators should be DAE with one-year relevant experience or matriculation with 3 year relevant experience with competency in running solids Control equipment. (1+4 no. personnel minimum requirement, for each category i and ii)	5	
	If relevant experience is 3 year or more with DAE or 5 year relevant experience or more as Matriculation than additional 1/2 point will be given for each Personnel	7.5	
2.2.6	* Office support Manager / Coordinator (Base Support Manager) having 10year experience ((7+3) 10-year experience of waste management and 5-year experience as support Manager / Coordinator) and Professional Engineering or equivalent. He will be assigned as coordinator for daily coordination and support with concerned OGDCL officials at Head office and with well site at no cost to OGDCL.	8	
	If experience in addition with is ((10+5 years) 10 year experience of waste management and 5 year experience as support Manager / Coordinator including abroad experience)	10	
2.2.7	*HSE Supervisor/Coordinator having atleast 7 year Experience Including two Year HSE Supervisor/ Coordinator experience for routine visit at field, consult with company HSEQ site representative and Head office as well as supervise cutting treatment and pit restoration process at no cost to OGDCL.	8	
	if relevant experience is more than 9 year and above.	10	
2.2.8	*Driver/ heavy machinery Operator must be medically fit for duty and must be possess heavy duty vehicle driving license.	6	
2.2.09	* Proposed Supervisors/Sr. Operators should be fluent in spoken and written English having specific Pakistan experience.	5	
2.2.10	All proposed personnel for field operations are Pakistani nationals.	10	
	*90 of the proposed personnel for field operations are Pakistani nationals.	8	
MAXIMUM POINTS/MINIMUM QUALIFYING POINTS		**76/60**	

2.3 Health, Safety, Environment & Quality:

Offered personnel record must be included:

Sr. No.	Description	Requirement	Maximum points for full compliance	Bidders offer and response	Obtained points
2.3.1	*HSE Application for Drilling Fluid Waste Management services	*Copy of HSE policy for Oil field waste management	20		
2.3.2	*Auditing, Review and HSE Management	last two year record of audit review and subsequent improvement/decisions.			
2.3.3	HSE operations.	track record of last two years	10		
2.3.4	*General HSE training for Operators including Firefighting, First Aid etc minimum two trainings (can be submit more than two training record if operators have other HSE trainings.	Training content with two year record	15		
2.3.5	*Specialized HSE training for Supervisor /Sr. Operator, minimum 4 i.e HAZMAT, Chemical Safety, Waste Management, Environmental Protection, Risk Assessment, EAIA etc (can submit more than 4 certificates of offered personnel if Supervisor /Sr. Operator have other HSE specialized trainings.	Training content with valid record of offered/chosen personnel for contract	25		
2.3.6	*Emergency response plan	Provide details of content, training and drills of two years	20		
2.3.7	STOP card system	Application & compliance record last one year	5		
2.3.8	Spill control policy/procedure	Copy of policy /procedure & record of compliance	10		
2.3.9	PTW SYSTEM application & compliance*	application & compliance record for 2 wells	10		
2.3.10	Proper and safe skid, stairs, hand rails, kick plates, pad eye and gratings of offered equipment	Proof of Compliance	10		

Sr. No.	Description	Requirement	Maximum points for full compliance	Bidders offer and response	Obtained points
2.3.11	*Assessment of bidders subcontractors HSEQ application compliance	Applicable two year record of subcontractor to whom you place contracts	15		
2.3.12	Bidders subcontractors Audit and Inspection Report for Previous Audit	Two years record	10		
2.3.13	*ISO 9001 or equivalent Management Certification	Valid certificate	10		
2.3.14	*Repair & Maintenance of equipment	Detail of procedures and records.	10		
2.3.15	*Calibration of equipment	Provided the Record.	10		
2.3.16	Equipment 3rd Party inspection	Provided the Record	20		
Maximum points/Minimum Qualifying Points			**200/150**		

SECTION E:

FINANCIAL EVALUATION:

1. FINANCIAL BID FORMAT FOR CDFR SYSTEM FOR WBM ALONG WITH SERVICES CHARGES.

Rental Cost of CDFR Unit Complete Lump sum charges per day (Hi G dryer, Auger, 01 No. centrifuge, storage tank and other equipment /tool necessary for completing the operation along with Manpower (01 NO. Supervisor and 1 NO. operator) for fully operational, where reduced rate apply & for Standby day rates to be provided separately. Bidder will quote daily charges where **Maximum limits** of Reduce rates will apply for items ii,iii, & iv as define below:

Item (B-ii)= 80% of B-i.
Item (B-iii)= 50%of B-i.
Item (B-iv)= 30% of B-i.

Bidder must quote its price within (equal or lower than) maximum prescribed limits. In case of noncompliance i.e high rate quote by bidder, maximum limit of reduce rate will apply for financial evaluation and consequent release of payment against invoices.

S. #	Description	No. Of Days (A)	Daily Charges (US$) (B) (bidder will quote)	Total Cost (US$) C = (A) X (B)
1.	**OGDCL RIGS FOR ALL REGIONS For 200 days for 1- well in contract period of two year (for evaluation purpose only)**			
i	Operational day rate when CDFRS 24 hour operational (Full day rate)	80	B (i)	C (i)=80*B (i)
ii	Operational day rate when CDFRS operational less than 24 hours and greater than 20 hour per day	80	Bii	C(ii)=80*Bii
iii	when CDFR operational less than 20 hours and greater than 08 hour per day	20	Biii	C(iii)=20*B(iii)
iv	Less than 08 hour operational considered standby	20	B (iv)	C (iv)=20*B(iv)
	Total Cost for CDFRS for Contract period of two year (including operational + standby rates) (US$) (D)			D=C(i)+C(ii)+ C(iii)+ C(iv)

Note:

(i) No. of days as well as no. of wells are tentative and for financial evaluation purpose only which may change as per operational requirement.

(ii) Standby and reduced rate will be applicable as per above financial format.

(iii) The prices are inclusive of all taxes (Except PST /ICT on services) as per draft contract Section-5.

Break-Up Of CDFR System (For Operational & Standby)
Breakup cost should be equivalent to total cost as mentioned in above table 1

S.#	Description	NORTH / CENTRE / SOUTH REGION			
		Per Day Operational Rate(B(i)) for Service 1(i) (US$) (bidder will quote as per define max. limit)	**Per Day Operational Rate(B(ii)) for Service 1(ii) (US$)** ((bidder will quote as per define max. limit)	**Per Day Operational Rate(B(iii)) for Service 1(iii) (US$)** (bidder will quote as per define max. limit)	**Per Day Stand- By Rate(B(iv)) for Service 1(iv) (US$)** (bidder will quote as per define max. limit))
1-a	Hi-G Shaker,				
1-b	Augur for Transport of Cuttings/Caving				
1-c	Shaker Screens				
1-d	Holding Tank for Returned Mud				
1-e	Mud transfer pump,				
1-f	100 BBL Mud storage tank				
02	01 No. Centrifuges				
03	Personnel Charges (01 NO. Supervisor 01 No. operator)				
	TOTAL COST (01 + 02 + 03)				

Note:

i. OGDCL has the right to either hire individual or multiple component depending upon the operational requirement.

2. FINANCIAL BID FORMAT FOR COAGULATION, FLOCCULATION UNIT ALONG WITH SERVICES CHARGES:

Rental Cost of Coagulation Flocculation Unit including Dewatering unit which will comprise on Chemically Enhanced Automated flocculation unit, settling tanks having treating capacity of 400 bbl to 500 bbl per batch, positive displacement pump, Consumables/chemicals and any other equipment required to run the unit along with supervisor/ Senior operator and junior operator services rates and storage tank. Total fully operational, where reduced rate apply & for Standby day rates to be provided separately. Bidder will quote daily Rental charges for volume ranges where **Maximum limits** of Reduce rates will apply for items ii,iii, & iv as define below:

Item (F-ii)= 80% of F-i.
Item (F-iii)= 50%of F-i.
Item (F-iv)= 30% of F-i.

Bidder must quote its price within (equal or lower than) maximum prescribed limits. In case of noncompliance i.e high rate quote by bidder, maximum limit of reduce rate will apply for financial evaluation and consequent release of payment against invoices.

S.#	Description	Estimate No. Of Days (E)	Daily Rental Charges for volume range US$ (F) (bidder will quote)	Total Cost (US$) G = (E) x (F)
1.	**OGDCL RIGS IN NORTH / CENTRE / SOUTH REGION** **For 5400 Days(30 Wells in Contract Period of 2 Year):- (for evaluation purpose only)**			
i	Operational Day Rate If treated volume of waste pit water/effluent is equal to or more than 1200 bbls per day.	**1080 days**	**F(i)**	**G(i) = F(i)* 1080**
ii	Operational Day Rate If treated volume is 1199 – 600 bbls/day	**1080 days**	**F(ii)**	**G(ii)=F(ii)* 1080**
iii	Operational Day Rate If treated water volume is less than 600 bbls per day.	**1620 days**	**F(iii)**	**G(iii)=F(iii)* 1620**
iv	Standby charges. Standby Day Rate should be less than 30% of F(i)day rate	**1620days**	**F(iv)**	**G(iv)=F(iv)* 1620**
Total Cost for Coagulation/flocculation unit for Contract period of two year (including operational + standby rates).(US$)(H)				**H=G(i)+ G(ii)+ G(iii)+ G(iv).**

Break-Up of Coagulation, Flocculation Unit Lump Sum Cost,(For Operational & Standby)

S.#	Description		NORTH / CENTRE / SOUTH REGION			
			Per Day Operational Rate for(F(i)) (US$) ((bidder will quote as per define max. limit))	**Per Day Operational Rate for(F(ii)) (US$)** (bidder will quote as per define max. limit)	**Per Day Operational Rate for(F(iii)) (US$)** (bidder will quote as per define max. limit))	**Per Day Stand by Rate for(F(iv)) (US$)** (bidder will quote as per define max. limit)
1	**Dewatering Unit (comprising as minimum Automated Flocculation Unit+ Floc Settling tank+ Positive Displacement Feed Pump+ chemicals accessories)**					
2	**100 bbl reserve tank**					
3	**Personnel Charges (02. No operators)**	Senior				
		Junior				
	TOTAL COST (01 to o3)					

NOTE:

i. The operational & Standby day rate of CDFR & Coagulation, flocculation System must be exactly same as its total sum quoted in its break-up.
ii. The given numbers of days are for evaluation purpose only, may change as per operational requirement.
iii. Standby and reduced rate will be applicable as per define maximum range in each item.
iv. The prices are inclusive of all taxes (except PST/ICT on services) as per draft contract section-5.

3. FINANCIAL BID FORMAT FOR SPRINKLING DISPOSAL OF TREATED WATER:

Per barrel sprinkling disposal charges according to total quantity sprinkled to be provided separately. Bidder will quote per barrel sprinkling disposal charges for volume ranges where **Maximum limits** of Reduce rates will apply for items ii & iii as define below:

Item (I-ii)= 70% of I-i.

Item (I-iii)= 40%of I-i.

Bidder must quote its price within (equal or lower than) maximum prescribed limits. In case of noncompliance i.e high rate quote by bidder, maximum limit of reduce rate will apply for financial evaluation and consequent release of payment against invoices.

FINANCIAL BID FORMAT FOR SPRINKLING SERVICES.

S.#	Description	Estimated quantity bbls for each range	Per barrel sprinkling disposal Charges for volume range US$ (I) (bidder will quote)	Total Cost (US$) J = (I) x Estimated quantities
1.	**Treated Waste Water** **Sprinkle/decant charges from well site to environmentally acceptable place for total 1,440,000.0 bbl for 25-Wells in contract period of 2 years for evaluation purpose only.**			
i	Per barrel cost, If Decanting/ Sprinkling Disposal volume is 421bbl/day (equivalent to 8-bowsers approx. quantity having capacity of 60bbl each) or above per day .	1,080,000 bbl	**I(i)**	**J(i) =** I(i)* 1080000
ii	Per barrel cost if Decanting/ Sprinkling Disposal volume is 181 bbl to 420 bbl(quantity equivalent to 4 to 7 apprx.bowsers/day while each bows. capacity is 60 bbl .	279000 bbl	**I(ii)**	**J(ii)=**I(ii)* 279000
iii	If Decanting/ Sprinkling Disposal volume is within 180 bbl (quantity equivalent to 3 bowser apprx/day while each bowser containing 60bbl volume).	81000 bbl	**I(iii)**	**J(iii)=** I(iii)* 81000
Total Cost for sprinkling for Contract period of two year (US$) (K)				**K=J(i)+ J(ii)+ J(iii)**

NOTE: The given number of barrel and capacity of bowsers are for evaluation purpose only, may change as per operational requirement. payment will be made as per actual volume decanted/sprinkled (actual bbls disposed of).Reduced rate will be applicable as per mentioned financial limits. The prices are inclusive of all taxes (except PST/ICT on services) as per draft contract section-5.

4.FINANCIAL BID FORMAT FOR WBM/EFFLUENT/BRINE TRANSPORTATION SERVICES CHARGES:

S. #	Description	Estimated Quantity for one Well (considering One Well volume=300 bbl & covered estimated distance = 100 km) (300 bbl X 100km) "L"	Transport. Charges for 1bbl/km (bidder will quote) (M)	Total Cost of WBM transport. Charges for one Well US$ N = (L X M)	Transport. Charges for ten (5) Wells Per Year (US$) O= 5 X N	Total Transportation Cost for the contract period of 02 Years (US$) P = 2 X O
1.	WBM/Effluent/ Brine transportation charges for shifting of 300BBL (5 bowsers having capacity 60bbl each) from one site to 100 KM away other location. (for evaluation purpose only.)	30,000.00				

NOTE: Payment will be made for the actual volume of WBM shifted & shortest distance between the locations covered for transportation of Mud.

5 FINANCIAL BID FORMAT FOR MECHANICAL DISPOSAL OF TREATED WATER SERVICES:

Total fully operational, where reduced rate apply & for Standby day rates to be provided separately. Bidder will quote daily Rental charges for volume ranges where Maximum limits of Reduce rates will apply for items ii,iii,iv & v as define below:
Item (V-ii)= 80% of V-i.
Item (V-iii)= 60%of V-i.
Item (V-iv)= 40% of V-i.
Item (V-v)= 30% of V-i.
Bidder must quote its price within (equal or lower than) maximum prescribed limits. In case of noncompliance i.e high rate quote by bidder, maximum limit of reduce rate will apply for financial evaluation and consequent release of payment against invoices.

S.#	Description	No. Of Days (U)	Daily Rental Charges for volume range US$ (V) (bidder will quote)	Total Cost (US$) W = (U) x (V)
1.	**OGDCL RIGS IN NORTH / CENTRE / SOUTH REGION** **For 855 operational+45 standby Days for 5 Wells in Contract Period of 2 Year):- (for evaluation purpose only)**			
(i)	Operational day rate when Mechanical disposal volume is equal to or greater than 600bbl	300	V(i)	W(i) = V(i)*300
(ii)	Operational day rate if Mechanical disposal volume is less than 600 bbl and greater than 500bbl:	255	V(ii)	W(ii) = V(ii)*255
(iii)	Operation day rate if Mechanical disposal volume is less than 500 bbl and greater than or equal to 300bbl	200	V(iii)	W(iii)= V(iii)*200
(iv)	Operation day rate if Mechanical disposal volume is less than 300 bbl	100	V(iv)	W(iv)=V(iv)*100
(v)	Standby Day Rate	45	V.(v)	W(v) = V(v)*45
Total Cost for Mechanical disposal of treated water for Contract period of two year (including operational + standby rates).(US$) (X)				X= W(i)+ W(ii)+ W(iii) +W(iv)+W(v)

i. The given numbers of days are for evaluation purpose only, may change as per operational requirement.
ii. Standby and reduced rate will be applicable as per mentioned/define financial model.
The prices are inclusive of all taxes (except PST/ICT on services) as per draft contract section-5.

SUMMARY OF: **CDFR, COAG./FLOC. UNIT, SPRINKLING AND MECHANICAL DISPOSAL OF TREAED WATER, WBM/ EFFLUENT/BRINE TRANSPORTATION SERVICES.**

Sr. No	Description	Total cost of CDFR system for 02 years (US$) (D)	Total cost of coagulation/ flocculation system services for 02- years (US$) (H)	Total cost of Sprinkling Disposal of treated Waste water services for 02 years (US$) (K)	Total cost of Transportation services of WBM/Effluent/ brine for 02 years (US$) (P)	Total cost of Mechanical Disposal services of treated Waste water services for 02 years (US$) (X)	Grand Total for 02 years (T) (US$) = sum of D+ H+K+P+X
1	North / Centre/ South Region SUMMARY OF ALL CATEGORY SERVICES COST						

OTHER IMPORTANT INFORMATION

BIDDING METHOD:

Bids against this tender are invited on **'single stage Two envelop**"

AMOUNT OF BID BOND & PBG:

a) Bid Bond /Bid Security amounting to **USD 30,000/-** is to be attached / provided with the technical bid. Please see Master Set of Tender Document for further details.

b) PBG will be 7 % to total contract value

MANDATORY REQUIREMENT

For online payment to vendors/contractors through (IBFT & LFT). Following info is required from your company: -

1. IBAN (INTERNATIONAL BANK ACCOUNT NUMBER 24 DIGITS).
2. VENDOR NAME AS PER TITLE OF THEIR BANK ACCOUNT.
3. NTN NO.
4. CONTACT # OF COMPANY CEO/OWNER (MOBILE & LANDLINE).
5. POSTAL ADDRESS.
6. BANK NAME.
7. BANK BRANCH NAME & ADDRESS.

The master set of tender documents (services) uploaded on OGDCL's website (www.ogdcl.com) is the integral part of this TOR.

Bidders are requested to read TOR & Master Set to Tender Documents (Services) and provide complete information / documents including tender annexures with the bid.