

OIL & GAS DEVELOPMENT COMPANY LIMITED



TENDER ENQUIRY # PROC-SERVICES/CB/WS-4924/2020

**HIRING OF DRILLING FLUID WASTE MANAGEMENT
SERVICES FOR WATER BASE MUD**

ENCLOSURES:

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SECTION: A

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 2021-2023 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 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) <u>Vehicle Services:</u> (i) Decanting or Sprinkling Disposal of Treated Water. Transportation of Water Base Drilling Fluid/Effluent/ Brine Services. (b) Mechanical Disposal of Treated Water i.e Evaporation or equivalent techniques.
iv-	Treatment of WBM Cuttings, Disposal of WBM Cuttings and Pit Restoration.

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. A simple "YES" is not acceptable as answer.

1. The bidder should be internationally recognized and well established in rendering Waste Management Services.
2. The bidders have to submit the proof of providing the above mentioned services for each category to other E&P companies in Pakistan or abroad but outside the country of origin during the recent past five (5) years.
3. List of the clients to whom the above mentioned services provided during recent past five (05) years should be submitted with the technical bid.
4. 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.
 - 4.1 Minimum 2-3 units of CDFR comprising Hi-G dryer, auger, centrifuge, storage tank and pump etc.
 - 4.2 Minimum 4-5 complete set of Dewatering unit/ (Coagulation, Flocculation unit) along with centrifuge and Flocculation tank.
 - 4.3 Minimum 6 bowsers should be available for category- iii.
 - 4.4 Minimum 1 set of equipment with sufficient quantities of required chemicals should be available for category –iv.
5. Detail of base along with no. of units of equipment of each category must be provided along with technical proposal.
6. 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.
7. 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.
8. 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)& iv. 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.

9. The successful bidder will be liable to dispatch the same equipment (having exact serial number as per their quotation) at work /job site.
10. Following certificates of offered equipment to be submitted with the technical proposal:
 - 10.1 Explosion proof Certificate of equipment where applicable. This certificate should be verifiable.
 - 10.2 OEM certificate, describing the age of equipment.
 - 10.3 Third party Load, MPI.
11. The bidder is bound to submit equipment function test / QA / QC / certificates, third party valid inspection. Standard QMS and HSE documents with technical bid
12. All the bidders must have to provide minimum five (05) case studies of successfully implemented services for category-i & ii and two (2) case studies of successfully implemented services category-iii & iv along with the technical proposal.
13. Each bidder should quote firm prices for equipment and services for the contract period of two (02) years. However, the contract will be extendable further one (01) year subject to mutual consent of both the parties and on the same rates, terms & conditions.
14. 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.
15. The offered equipment should be compatible with Rig & its Power source. In case of Non-Compatibility, 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.
16. Specifications sheets along with drawings for all the quoted equipment to be provided along with the Technical bid
17. The bidder will provide full detail of treatment procedure to be adopted and treatment time for one batch of cutting along with detail of Equipment and total chemicals / materials quantities to be consumed for treatment of cutting per ton.
18. The bidder will also provide the detail of equipment along with the consumable used for disposal of cutting and pits restoration for one well.
19. 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 4-5 CVs of Supervisors/ Senior Operator and 4-5 CVs of Assistant/ Junior Operator along with the technical bid for category -i & ii.

20. 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.
21. 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.
22. Contractor should have Office Support Manager / Coordinator (Base Support Manager) having relevant experience of more than 15 years (including 10-years Waste Management rig site and 5-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 and at no cost to OGDCL. Minimum one (1) no. CV of Office Support Manager/ Coordinator must be enclosed with the technical bid.
23. 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.
24. Contractor Personnel team for category-iv, should include but not limited to Supervisor, HSE Representative, Helpers and Machine Operators. All employees should be highly experience in their respective cadre. Driver/Heavy Machinery Operator must be possessing heavy duty vehicle driving license and having 5 year working experience with oilfield. bidder must submit CVs of one team for services at category IV with technical proposal.
25. The offered personnel for Waste Management Services by the contractor will meet the following requirements:
 - 25.1 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
 - 25.2 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.
26. The designated personnel should be competent in resolving Waste Management issues and
 - 26.1 should be able to handle / operate all Equipment under this

- contract, efficiently.
- 26.2 should be able to maintain the optimum parameters and ensure satisfactory Equipment efficiency.
 - 26.3 should have adequate H2S training.
 - 26.4 should have adequate HSEQ training.
 - 26.5 should have sound knowledge about specification of SCE, Working principle, design, operation and maintenance of Hi-G Shakers, centrifuge, agitators & Pumps, Dewatering unit. etc.
27. The companies obtaining minimum qualifying marks in each clause as per Technical Evaluation Criteria (TEC) criteria will be declared technically responsive subject to fulfilling all the terms and conditions/instruction to the bidders as per all enclosures.
 28. Proposed Supervisors/Sr. Operators should be fluent in spoken and written English & Contractor designated staff for company should be Pakistani national (minimum 90 %)
 29. 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.
 30. If the contractor fails to supply the equipment within the stipulated time frame, OGDCL would have the right to call for equipment/services to 1st backup contractor or from alternate resources on Contractor's account.
 31. Installation of the units i.e CDFR System, Dewatering unit or evaporation unit at Rigs will be on the contractor's account including any type of material or energy source if required.
 32. Import/ Export custom clearance, custom duties, or any other cost of the contractor equipment and consumable will be at contractor's account.
 33. All types of repairs and maintenance of equipment will be the contractor's responsibility including the cost of consumable and spares used.
 34. OGDCL will have the discretion to hire any part of equipment i-e, CDFR unit or Centrifuge only /or dewatering unit without centrifuge and without settling tank or only storage tank or only services of crew (senior/junior operator) without equipment.
 35. 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 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.

36. API RP 13C compliance screen are mandatory. Verifiable proof of API compliance along with API of screen manufacturer must be submitted with technical bid.
37. Contractor will responsible to ensure that OEM rated load capacity shall not be exceeded on all load lifting equipment as well as equipment should be operated and maintained as per OEM recommendation.
38. 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.
39. 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.
40. 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.
41. Contractor must have its own Training System in place. Training certificates and documents should be verifiable to Company satisfaction for offered field staff.
42. If any contractor's equipment require maintenance at well site than 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.
43. On site laboratory testing as well as sampling 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.
44. Parameters of Treated Waste Water recovered after dewatering process and treatment should comply with local/international Environment regulations and should be useable in Mud mixing, washing at Mud tanks, cooling of Rig equipment and other well site requirement.
45. The contractor shall ensure before dispose of treated waste either water or cutting, their parameters should be under the environmentally acceptable limits 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.
46. 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.

47. Contractor will be prefer Rig area for sprinkling purpose of treated water However, if Rig area circumstances could not permit due to any reason then contractors field supervisor and I/C (Mud) at Well site will initially visit the nearest environmentally acceptable suggested by contractor site for sprinkling of treated water, to check the feasibility of site for decanting of treated water and if found the site ok than a combine report from both the representative duly verified by Operation Manager/Company Man will be submitted to Head office subsequently after the approval from Head office, sprinkling will be commenced. Moreover, verification of invoice for sprinkling services will be based on that report therefore, this report should be a part of each invoice of that particular well.
48. The contractor shall conduct and submit a post job waste management evaluation report after each well and advise the Company on technique and suggestions / lesson learnt for improvement in Drilling Fluid Waste Management.
49. 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.
50. 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.
51. The contractor will provide and ensure the use of life saving PPEs for their site /field personnel during waste management services.
52. The contractor shall provide Solids Control Training to Company's 06 (six) professionals each year of the contract duration. Contractor shall bear all training, boarding, lodging visa and traveling expenses. The minimum duration of the course shall not be less than One Week.
53. 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.
54. No reimbursement/payment will be made for work/job which is not performed in accordance with the contract.
55. The payment, to Contractor, will be made as per draft contract Section - 04.
56. 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 given Financial model basis on actual usage of component/parts of units, & services of the personnel for the operational and stand by number of days after verification of invoices from site Drilling Fluid Engineer, Operation Manager/ Company Man and Drilling Fluid Department, Head office, OGDCL.
57. No payment will be made for shut down period during which any repair/maintenance would be made by contractor on location.

58. The invoices shall be complete duly supported by daily activity reports of each job performed, initially verified by site Drilling Fluid Engineer and Company Man. Separate invoices be submitted for each category services performed.
59. Due to conflict of interest, Service company providing Drilling Fluid Services to OGDCL during the term of contract will not be entertained.
60. The de barred/black listed firms are not eligible to apply. However, after completion of debarred time period, formal approval/NOC from OGDCL management must be acquired and attached with the bid.
61. 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.
62. The case may be processed on total lump sum cost Basis.

TECHNICAL SPECIFICATIONS

Each bidder should conform to the required technical specifications; each bidder should fill-in the given tables with the exact value of these parameters of their quoted equipment/Product. Only to write conforming to or O.K. will not be sufficient.

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

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

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: 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. Minimum processing Capacity should be 40 M.Ton/hr.
- iii. Shaker motor should be Explosion proof-Minimum Class 1 and Division 1 rated, according to standard IP56.
- iv. Screen rotation should be 850 rpm (minimum),
 - v. Compatible with rig electric supply, Volts, Hertz (460 V, 60 Hz or 380 V 50 Hz) etc .
- vi. May be able to handle 600-800 GPM of 10-12 PPG, 20 PV and 14 YP mud through API-170 Screens.
- vii. Having provision of installation of all type API screens.
- viii. 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.

ix. **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.

ix. 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

xi. 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.

xii. FEEDERS:

- a- Must be equipped with traditional 35-42 gallon back tank with weir feed
- b- Weir feed with bypass must offer a valve that can be opened if the fluid needs to be bypassed of the shakers
- c- The top feeders must evenly spreads the flow of mud across the shaker basket eliminating excess volume

xiii. 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 have 10-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.

B: 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 however having a standard length of 30 feet.
- 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.

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

- 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.
- 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: Transfer Pump- Recovered Mud to Mud Tanks.

- i. Pump use for transferring recovered WBM must be skid mounted and having power minimum 20-30 HP.
- 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. May have minimum of 3” X 3” Suction & discharge lines and /or 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.

E- 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.

F- 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. Thus higher conductance against the corresponding API number will be the only acceptable criterion.

G. Centrifuge (FHD):

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)

Dedicated Fully Hydraulic Drive centrifuge with variable bowl/conveyer differential having following technical specifications The Fully Hydraulic Drive 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 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.

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.

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	40-60 ton/hr	
13	Length	Variable Auger length as per requirement. standard=30 feet	
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	200GPM(minimum) @ 8.9 ppg 50 GPM (Minimum) @ 20 ppg	
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 20-150 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: DEWATERING UNIT (COAGULATION, FLOCCULATION UNIT) 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.

- ISO standard multi compartment Chemical mixing unit
- Floc Settling tank should have capacity of 400 to 500 bbl of one batch.
- Dosing pumps/ Agitators/manifold
- Decanting Centrifuge with pump (Specification has been given in above).
- Chemicals
- Mobile field lab
- 100 bbl storage tank.

TECHNICAL SPECIFICATION OF DEWATERING UNIT (COAGULATION, FLOCCULATION UNIT)

In Dewatering System coagulants and flocculants technology will be used to make the ultrafine particles (≤ 2 microns) aggregate into large mass, then separate by dewatering centrifuge. The treated water should be used for mud mixing, washing at mud tanks, cooling of Rig equipment and dust suppression at site. The system used must be complied with environmental rules and regulations. 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 capable of testing pH, turbidity, TSS, TDS, Temperature, Chloride, Sulfate 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. Centrifuge feed pump must be a progressive cavity positive displacement pump.
- ix. The unit and process must be compatible with high to low pH range of waste water.
- x. All specs will be furnished with drawing/proof of evidences.
- xi. Contractor has to follow applicable environmental regulations and related National Environmental Quality Standards(NEQS) strictly either by treated mechanically, chemically or by dilution.
- xii. Contractor has to ensure that no liquid or solid waste discharged on to the land surface or into water body without treatment and applicable parameters are met.
- xiii. OGDLC has right to ask for third party independent laboratory testing by contractors own cost for those parameters cannot be tested in field laboratory.
- xiv. Parameters are mentioned below must be tested and to be reported to OGDCL Rig/Site Incharge /site Mud Engineer and to Head office on regular basis as well as prior to discharge into the Land/sewage system. Contractor will make sure that post treatment results of treated water must comply following NEQS parameters:

Water Parameters	pH	TDS	TSS	Chlorides	Oil & Grease	Phenolic Compound	BOD5	COD
Acceptable Range	6-9	350 0	200*/400* *	1000	10	0.1*/0.3**	80*/250**	150*/400**

* if discharged into land

** Acceptable to discharge into sewage system

- xv. Recycled/processed water must be suitable for use in persisting mud system for dilution/volume make up/preparation of Mud; for cooling of Rig Equipment at Rig site etc. Confirmation to this effect must be submitted with technical offer.
- 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.

DEWATERING UNIT(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 pump progressive cavity positive displacement pump for feeding of centrifuge	
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	Centrifuge for chemically enhanced flocculation automated unit	Fully Hydraulic Drive must be able to remove fine particles at highest speed. Efficiency of centrifuges, end result shall be 2 - 5 microns after discarding low gravity. Other specification as mention in above section	
9	Size and dimension	Able to mobilize with 40/20 ft. trailer	
10	Electrical Safety	Must be ex-proof Certificate	
11	Site lab container	capable of testing Ph, Turbidity, TSS, TDS, Temperature, Chloride, Sulfate etc	
12	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 DISPOSAL OF TREATED WATER SERVICES.

(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 minimum 60 bbl per bowsers Per 100 Km basis. However, the payment will be made as per actual; considering the total volume of mud shifted and distance covered from one location to other. 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/decanted into Rig site area or environmentally accepted locations on minimum 60 bbl per bowsers Per Km basis. However, the payment will be made as per actual; considering the total volume of treated water sprinkled/decanted and actual distance covered from one location to the environmentally acceptable location. 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 treated water for sprinkling/dust suppression purpose, then he is bound to comply with the local / international standards or guidelines for reuse of wastewater in sprinkling purpose.

TECHNICAL SPECIFICATIONS FOR VEHICLE SERVICES

- 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 60bbl bowser per km (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 .	

L: TREATMENT OF WBM CUTTINGS (MIXING OF SOIL AND ADDITIVES WITH DRILL CUTTINGS), DISPOSAL OF CUTTINGS AND MUD WASTE PITS RESTORATION/ CLOSURE.

OGDCL intended to use waste stabilization/solidification technique for WBM cuttings treatment. For this purpose, contractor will collect the sample in the presence of OGDCL representative and send it to any reputable EPA approved Laboratory for analysis of standard as per Louisiana Statewide Order (LSO) No. 29-B to assess whether treatment is required or not. Report shall be submitted to the Company for acquiring approval for the treatment of WBM drill cuttings. After treatment, contractor shall arrange sampling of waste soil mixture

and got tested from EPA approved Laboratory; the result shall comply with following LSO 29B Standard.

Cutting parameters	Ph	Moisture Conte-nt (%)	Electric Conductivity EC	Oil & Grease (%)	Arsenic (ppm)	Barium (ppm)	Cadmium (ppm)	Chromium (ppm)	Mercury (ppm)	Selenium (ppm)	Silver (ppm)	Zinc (ppm)	Lead (ppm)
LSO- 29-B Acceptable Range	6-9	<50%	<12 mmhos/cm	<3%	10	4000	10	500	10	10	200	500	500

When parameters are in accordance with LSO 29B, contractor will follow the following steps for the disposal of cutting /pit restoration/closure.

- i. **Option - 1:**
when circumstances are favorable i.e land is not an agricultural land and area is not a water logged area and locals are agreeing for on-site disposal than these cutting will be dispose off on-site. Contractor shall remove the HDPE pit liner and excavate down to such depth so that cutting/waste soil mixture can be buried with 1-meter top of soil to match surrounded ground level.
- ii. **Option - 2:**
ii(a). In case circumstances are not favorable i.e the land is an agricultural land or it's a water logged area or locals are not agreeing for on-site disposal than contractor will go to off-site disposal of solid waste. Contractor shall select off-site disposal site by considering that site is not an agriculture land or water logged area. The site ground water aquifer is such deep that the bottom of burial cell must be 5 feet (atleast)

above the seasonal high water table. Contractor shall acquire NOC from land owner of disposal site stating that they have no issue to dispose off subject waste. Disposal methodology shall be in line with National Environmental Laws / International standards.

- ii(b). When cutting are disposed off site: contractor will have to remove the HDPE pit liner and will disposed of it off-site. The pits will be backfilled with native soil and pit area should be levelled the with surrounded ground level.
- ii(c). The contractor must submit written proof from land owner for availing Option -02 having unfavorable condition with detailed reason. However, the department decision will be considered final.
- iii. After completion of pit restoration, contractor shall bound to acquire pit restoration Certificate from Land Owner(s) as proof of successful and satisfactory completion of pit closure job.
- iv. OGDCL Representative may witness the disposal activity.
- v. Contractor will conduct risk assessment of above scope of work and submit it to the Company for review and approval.
- vi. After completion of the work, contractor shall require to submit Project Close Out Report. Report will include following (as a minimum):
 - Introduction / Executive Summary.
 - Objective, Scope & Disposal Methodology adopted by the Contractor.
 - Details of the actual project activities.
 - Estimated quantity of solid waste (WBM Drill Cuttings) disposed .
 - HSE Statistics.
 - Risk assessment of the activities performed.
 - Third party sampling results of dry drill cuttings (treated and untreated).
 - NOCs from Land Owner(s) on Affidavit.
 - Waste Disposal certificate(s).
 - Test reports.
 - Photographic records of project and site restoration.
- ix. Contractor shall be responsible for any legal repercussion due to noncompliance/malpractice before, during or after disposal activities.
- x. Contractor should have fully trained efficient work personnel along with adequate resources, good working condition equipment, preferably be new but not older than 10 years. As heavy machinery is involve in the operation so contractor should be able to carry out the said services.
- xi. Contractor shall have in its possession all relevant licenses from local regulators / agencies including Environmental Protection Agency, TMA etc. (copies to be provided with the bid).
- xii. Contractor must have similar experience of fast track treatment of Oil & Grease.
- xiii. Contractor will use its all resources (equipment, material, man power etc) to execute the job within due time period.
- xiv. Contractor will conduct at least two tests (before and at the end of the treatment) and report will be submitted to OGDCL Head office.
- xv. The bidder will provide full detail of chemicals used in treatment procedure of water base cuttings along with detail of Equipment/machinery.
- xvi. Contractor will also provide the detail of equipment and consumable for pits restoration for one well.
- xvii. Chemicals used with native soil for cutting treatment must be environmental friendly. MSDS of proposed chemical to be attached with bid proposal.

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.
- 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) <u>Vehicle Services:</u> (iii) Decanting or Sprinkling Disposal of Treated Water. Transportation of Water Base Drilling Fluid/Effluent/ Brine Services. (b) Mechanical Disposal of Treated Water i.e Evaporation or equivalent techniques.
iv.	Treatment of WBM Cuttings, Disposal of WBM Cuttings and Pit Restoration Services.

TECHNICAL EVALUATION:**DISTRIBUTION OF MARKS FOR FULL PACKAGE OF
SERVICES FOR CATEGORY i - iv**

S. No	Tender Requirement	Maximum Marks	Minimum Qualifying Marks
1	Key Acceptance Criteria (Mandatory)	(MANDATORY)	(MANDATORY)
2	Equipment	50	39.47
3	Personnel	30	24.31
4	HSEQ	20	15.0
Total		100	78.78

DETAIL OF DISTRIBUTION OF MARKS:

S.NO.	TECHNICAL CRITERIA	Maximum allotted points	Minimum qualifying points
1	Key Acceptance Criteria	Mandatory	
2	Equipment	323 points (equal to 50 Marks)	255 points (equal to 39.47 Marks)
	Personnel	95 points (equal to 30 Marks)	77 points (equal to 24.31 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)

		Mandatory	Bidder's response
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.		
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. Five (5) case studies of successfully implemented services for category-i, ii & iii (a & b) and 2 case study for category-iv, 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. 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.	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	Mandatory	

	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.		
1.10	Contractor's all equipment for (categories I to IV) 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 <u>TOR</u> .	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 is must. 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	Dewatering/ Coagulation, Flocculation Unit 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	Site Restoration machinery must not be older than 10 years. Machinery and site restoration procedures must be complying with EPA requirements & LSO29B. Contractor to submit equipment & machinery certificates fitness and emission certificates, third party load, MPI certificate. Set of complete equipment for subject service as mentioned in technical specification is mandatory.	Mandatory	
1.16	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 5 th	Mandatory	

	pin of vehicles after every six months. Bidder to submit equipment age verifiable certificates. Bowers must be capable to handle mud above 2.2 SG. Bowser tanks must be double walled and multi compartmented. 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.		
1.17	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	
1.18	Due to conflict of interest, Service company providing Drilling Fluid Services to OGDCL during the term of contract will not be entertained	Mandatory	
1.19	Bidder to provide proof of the quality of drilling fluid recovered by the CDFR. directive	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 800 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	
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	

Sr. No.	Description	Maximum Score	Obtained Score
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	
	Augur		
2.1.11	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 14 inch bowl diameter. Bowl Drive – Variable speed hydraulic (1/2 RPM – 3400 RPM). <ul style="list-style-type: none"> • Scroll Drive – Variable speed Hydraulic (3 RPM – 90 RPM differential speed) Operating Temperature Range [-10 C to 50 C]	10	
2.1.17	The age of offered units/ equipment is:		
	<3 years	10	
	>3 & =or <5 years	8	
	* >5years and =8 years	5	
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. <ul style="list-style-type: none"> • 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	14	

Sr. No.	Description	Maximum Score	Obtained Score
	<ul style="list-style-type: none"> 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 minimal pulsation and controlled flow rate whereas flow rate must not be less than 150 GPM - Variable Speed, Progressive Cavity Pump having positive displacement (20-150 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 20 HP at minimum.	5	
Containerized Dewatering unit (coagulation, flocculation unit with floc settling tank capacity of 400 bbl to 500 bbl per batch.			
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)		
	2 dosing pumps for coagulant (1 standby)		
	1 pump progressive cavity positive displacement pump for feeding of centrifuge		
	Multi compartmented unit comprising atleast but not limited to=1 x flocculent make up tank, 1 x coagulant make up tank, 1 dilution tank, 1 processed water tank etc. manifold should compatible to the offered system.	14	
	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	
	Processing capacity must be 1200-1500 bbl/day	10	

Sr. No.	Description	Maximum Score	Obtained Score
2.1.29	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	
Cutting treatment and pit restoration			
2.1.34	*Equipment and heavy machinery is 10 years old	8	
	7-9 year old	10	
	5-6 year old	12	
	<5 year old	15	
2.1.35	WBM cuttings treatment according to the standard LSO 29-B	5	
2.1.36	Emission of Excavator, dumper and tractor must be complying with NEQS requirement	5	
2.1.37	Necessary NOC from respective regulatory authorities.	5	
Mechanical disposal of Treated Water			
2.1.38	Processing capacity must be 500 bbl/day with minimal waste to be disposed of.		
	800bbl and above	15	
	600bbl to 799bbl	13	
	500bbl	10	
2.1.39	The age of offered units/ equipment is:		
	= or <3 years	15	
	>3 and <=5 years	13	
	6 to 8 years	10	
2.1.40	Sound output & Emission should be under EPA limits.	10	
2.1.41	Must be able to work in all weather conditions of South, Center and North region.	5	
Maximum points/Minimum qualifying points		323/255	

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 8 No. (i-e, 4 nos each category) Solids Control Supervisor / Senior operators (1 points for each)	8	
	CVs of 10 No. Solids Control Supervisor/Senior operators (addition of 1 for each)	10	
2.2.3	For CDFRS + Dewatering unit ,CVs of at least 8 no.s (i.e 4 each category) junior Operators	8	
	CVs of 10 junior Operators (addition of 1 for each)	10	
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 4 no. personnel minimum requirement , for each category i and ii(one point for each)	8	
	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.	12	
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. (4 no. personnel minimum requirement, for each category i and ii)	8	
	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	12	
2.2.6	* Office support Manager / Coordinator (Base Support Manager) having 15year experience ((10+5) 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+8 years) 10 year experience of waste management and 8 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. if relevant experience is more than 9 year and above.	8 10	
2.2.8	Driver/ heavy machinery Operator must be medically fit for duty and must be possess heavy duty vehicle driving license.	6	
2.2.9	Personnel team for water base cutting treatment, disposal of cuttings and pit restoration services should include but not limited to Supervisor, HSE representative, helpers and machine operators. All team employees should have five years Oilfield experience in their respective cadres. CVs of one team should be enclosed with technical proposal	5	
2.2.10	* Proposed Supervisors/Sr. Operators should be fluent in spoken and written English having specific Pakistan experience.	5	
2.2.11	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		95/77	

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	Training content with two year record	15		

	if operators have other HSE trainings.				
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		
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	10		

		and records.			
2.3.1 5	*Calibration of equipment	Provided the Record.	10		
2.3.1 6	Equipment 3rd Party inspection	Provided the Record	20		
Maximum points/Minimum Qualifying Points			200/150		

SECTION E:

FINANCIAL EVALUATION:

FINANCIAL MODEL:

The following financial model will be applicable for reduced rates at service day rates as per given condition.

(BIDDER TO PROVIDE THE UNDERLINED SERVICE RATE IN THE FINANCIAL BID FORMATE OF EACH CATEGORY SERVICE).

	Service Description	UoM	Daily Cost (USD)
1	CDFRS:	per day rate	
1.1	If 24 hour operational.	Full day rate	<u>“B (i)”</u>
1.2	If less than 24 hour and greater than 20 hour operational:	Reduced rate will be applicable:	80% of full day rate
1.3	If less than 20 hour and greater then 8 hour operational:	Reduced rate will be applicable:	50% of full day rate
1.4	Lesser then 8 hours operational ,considered standby.		
1.5	Standby rate:	Should be less than 30% of full day rate:	<u>“B (ii)”</u>
2	Dewatering Unit:	per day rate	
2.1	If treated volume of waste pit water/effluent is equal to or more than 1200 bbls per day.	Full day rate	<u>“F (i)”</u>
2.2	If treated volume is 1199 – 600 bbls/day	Reduced rate will be applicable:	80% of full day rate
2.3	If treated water volume is less than 600 bbls per day.	Reduced rate will be applicable:	50% of full day rate
2.4	Standby charges.	Should be less than 30% of full day rate.	<u>“F (ii)”</u>
3(a)i	Decanting/Sprinkling Disposal of Treated Water.	Per bowser (60 bbl volume) cost/5km	
1.	If Decanting/Sprinkling Disposal volume is 8-bowsers(480bbl) or above per day while each bowser containing 60 bbl volume.	100% service rate for one bowser per covered distance of 5 km.	<u>“J”</u>
2.	If Decanting/Sprinkling Disposal volume is 4 to 7 bowsers/day while each bowser containing 60 bbl volume.	Reduced rate will be applicable	70% of service rate
3.	If Decanting/Sprinkling Disposal volume is less than 3 bowser/day while each bowser containing 60bbl volume.	Reduced rate will be applicable	40% of service rate
3(a)ii	Transportation of Water Base Drilling Fluid/Effluent/ Brine Services.	Transportation cost 60bbl/100km	

1.	Transportation of Water Base Drilling Fluid/Effluent/ Brine Services	Service rate for transportation of 60bbl(1 bowser) per covered distance of 100km	<u>“M”</u>
3(b)	Mechanical Disposal of Treated Water.	per day rate	
1	If Mechanical disposal volume of treated water is equal to or greater than 600bbl than :	Full day rate	<u>V(i)</u>
2	If Mechanical disposal volume of treated water is less than 600 bbl and greater than 500bbl:	Reduced rate will be applicable:	80% of full day rate
3	If Mechanical disposal volume of treated water is less than 500 bbl and greater than or equal to 300bbl	Reduced rate will be applicable:	60% of full day rate
4	If Mechanical disposal volume of treated water is less than 300 bbl	Reduced rate will be applicable:	40% of full day rate
5	Standby charges.	Should be less than 30% of full day rate.	<u>V(ii)</u>
4	Treatment of WBM Cuttings, Disposal of WBM Cuttings and Pit Restoration.	Per Well cost	
1.	Cuttings treatment of WBM, disposal of Cuttings and Site Restoration (pertaining to waste pits management only).	Service Rate for Option:1(treatment of WBM cuttings and onsite cutting disposal and pit restoration/pit closure.	<u>“R(i)”</u>
		Service Rate for Option:2 (treatment of WBM cuttings and offsite cutting disposal and pit restoration/pit closure.	<u>“R(ii)”</u>

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 Operational & Standby (both) day rates to be provided separately.

S. #	Description	No. Of Days (A)	Daily Charges (US\$) (B)	Total Cost (US\$) C = (A) X (B)	Total Cost for CDFRS for two year (US\$) (D)
1.	OGDCL RIGS FOR ALL REGIONS				D = C (i) + C (ii)
i	OPERATIONAL DAY RATE WHEN CDFRS 24 HOUR OPERATIONAL	180	B (i)	C (i)	
ii	STANDBY DAY RATE	20	B (ii)	C (ii)	

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 model.
- (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)

S.#	Description	NORTH / CENTRE / SOUTH REGION	
		Per Day Operational Rate (US\$)	Per Day Stand- By Rate (Not more than 30% of Per Day Operational Rate) (US\$)
1	Hi-G Shaker,		
	Augur for Transport of Cuttings/Caving (30 feet)		
	Shaker Screens		
	Holding Tank for Returned Oil Base Mud		
	Mud transfer pump,		
	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. Rate of Augur will be quoted as per 30 ft. length; however, payment will be made as per actual length of Augur used on pro-rata basis.
- ii. OGDCL has the right to either hire CDFR unit, Centrifuge or both or only operator(s) depending upon the operational requirement.

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

Rental Cost of Dewatering unit will include Chemically Enhanced Automated Coagulation Flocculation Unit with settling tanks having treating capacity of 400 bbl to 500 bbl per batch, Decanting Centrifuge, Consumables/chemicals and supervisor/ Senior operator and junior operator services rates and any other equipment/tools required for completing the job. Total Lump Sum for Operational & Standby day rates to be provided separately.

S.#	Description	No. Of Days (E)	Daily Rental Charges US\$ (F)	Total Cost (US\$) G = (E) x (F)	Total Cost for Dewatering unit for two year (US\$) (H)
1.	<u>OGDCL RIGS IN NORTH / CENTRE / SOUTH REGION</u> 18 Wells in 2 Year:-				H = G (i) + G (ii)
(i)-	<u>Operational Day Rate with 100% volume</u>	3150 days	F.(i)	G.(i)	
(ii)-	<u>Standby Day Rate</u>	100days	F.(ii)	G.(ii)	

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

S.#	Description	NORTH / CENTRE / SOUTH REGION	
		Per Day Operational Rate (US\$)	Per Day Stand by Rate (Not more than 30% of Per Day Operational Rate) (US\$)
1	Automated Flocculation Unit including chemicals and accessories		
2	Centrifuge		
3	Floc Settling tank		
4	Positive Displacement Feed Pump		
5	100 bbl reserve tank		
6	Personnel Charges (02. No operators)	i. Senior	
		ii. Junior	
	TOTAL COST (01 to o6)		

NOTE:

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

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

S.#	Description	Quantity in bowser (60bbl bowser) (I)	Decanting/ sprinkling Charges of treated water for 60bbl (one bowser) for covered distance of 5 km US\$ (J)	Total Cost for 2 years US\$ K
1.	<u>NORTH/CENTRE/ SOUTH REGION</u> For 26000 bowser (60 bbl each) for covered distance of 5Km in contract period of 2 years.)	26000		K = (I) x (J)

NOTE:

- i. The given number and capacity of bowser & kms are for evaluation purpose only, may change as per operational requirement. payment will be made as per actual volume decanted/sprinkled per actual distance covered (actual bbl bowser/km).
- ii. Treated Waste Water sprinkle/decant charges are from well site to environmentally acceptable place.
- iii. Standby and reduced rate will be applicable as per above financial model. 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	No. Of Bowser For One Well "L"	Transportation Charges for one bowser (60bbl/bowser) for 100km (M)	Total Cost Of WBM transport. Charges for one Well US\$ N = (L X M)	TransportC harges for Five (5) Wells Per Year (US\$) O= 5 X N	Total Transportation Cost for 02 Years (US\$) P = 2 X O
1.	WBM/Effluent/ Brine transportation charges for shifting of 5 bowser from one site to other location.	5				

NOTE:

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

The given no. of bowser for one well and no. of wells are for evaluation purpose only.

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

S.#	Description	No. Of Days (U)	Daily Rental Charges with 100% volume US\$ (V)	Total Cost (US\$) W = (U) x (V)	Total Cost for two year (US\$) (X)
1.	OGDCL RIGS IN NORTH / CENTRE / SOUTH REGION 10 Wells in 2 Year				X = W (i) + W (ii)
(i)-	Operational Day Rate with 100% volume	1700 days	V.(i)	W.(i)	
(ii)-	Standby Day Rate (should be less than 30% of day rate)	100days	V.(ii)	W.(ii)	

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 above financial model.

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

6. FINANCIAL BID FORMAT FOR WBM CUTTING TREATMENT, DISPOSAL OF CUTTINGS AND PIT RESTORATION SERVICES CHARGES

Lump sum cost required including equipment, consumable, personnel and laboratory analysis expenditure.

S.#	Description	No. Of Wells in two year (Q)	Lump Sum Charges for one Well US\$ " R"	Total cost for 25 wells in two year (US\$) (S)=QXR	Total Cost for 02 Years (US\$) (T)=S(i)+S(ii)
	<u>NORTH, CENTRE & SOUTH REGION</u> WBM cutting treatment, disposal of cuttings and pit restoration/closure services				(T)=S(i)+S(ii)
	Option:1 (Cutting treatment and on-site disposal/pit closure)	Q(i)=25	R(i)	S(i)=Q(i)XR(i)	
	Option :2 (Cutting treatment and offsite disposal/pit closure)	Q(ii)=5	R(ii)	S(ii)=Q(ii)XR(ii)	

Note:

- i. The given numbers of wells are for evaluation purpose only, may change as per operational requirement.
- ii. The Bidder must provide in his technical bid the full detail of cutting treatment disposal of cutting and pit restoration procedure along with detail of chemicals / materials consumed and machinery used for a well.

SUMMARY OF: CDFR, DEWATERING UNIT, DISPOSAL/DECANTING/ EVAPORATION OF TREAED WATER, WBM/ EFFLUENT/BRINE TRANSPORTATION SERVICES, TREATEMENT OF WMB CUTTING, DISPOSAL OF WBM CUTTINGS AND PIT RESTORATION SERVICES.

S r. N o	Description	Total cost of CDFR system for 02 years (US\$)	Total cost of Dewatering system for 02- years (US\$)	Total cost of Decanting/ Sprinkling Disposal of treated Waste water services for 02 years (US\$)	Total cost of Transport ation services of WBM/ Effluent/ brine for 02 years (US\$)	Total cost of Mechanical Disposal services of treated Waste water services for 02 years (US\$)	Total cost of WBM cutting treatment, disposal of WBM cuttings and pit restoratio n services for 02 years (US\$) (T)	GRAND TOTAL COST (US\$) Y= [(D)+ (H)+ (K)+ (P)+(X)+ (T)]
		(D)	(H)	(K)	(P)	(X)		
1	<u>North / Centre/ South Region</u> <u>SUMMARY OF ALL CATEGORY SERVICES COST</u>							

OTHER IMPORTANT INFORMATION

BIDDING METHOD:

Bids against this tender are invited on ‘single stage Two envelop’

AMOUNT OF BID BOND:

Bid Bond /Bid Security amounting to **USD 110,000/-** is to be attached / provided with the technical bid. Please see Master Set of Tender Document for further details.

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.

Following is the link for Master Set of Tender Documents for Services:

<https://ogdcl.com/sites/default/files/tender%20download/Tender%20Document%20Services%20Pres%20for%20Web%20loading-Bid%20Bond%20%26%20PBG%20Extension%20text%20added%20dated%202009-09-2020.pdf>