

OIL & GAS DEVELOPMENT COMPANY LIMITED



TENDER ENQUIRY NO. PROC-SERVICES/LCB/RMD-3306/2018

**HIRING OF SERVICES FOR FIELD DEVELOPMENT & RESERVOIR
SIMULATION STUDY OF MELA OIL FIELD**



OIL & GAS DEVELOPMENT COMPANY LIMITED
SUPPLY CHAIN MANAGEMENT DEPARTMENT
OFFICE OF THE MANAGER SERVICES

OGDC HOUSE
JINNAH AVENUE,
ISLAMABAD – PAKISTAN

PHONE : +92-51- 92002 3780
E-mail : ejaz_rizvi@ogdcl.com
POST CODE : 44000

No: PROC-SERVICES/LCB/RMD-3306/2018

Dated: April , 2018

SUBJECT: LETTER FOR INVITATION TO BID FOR HIRING OF SERVICES FOR FIELD DEVELOPMENT & RESERVOIR SIMULATION STUDY OF MELA OIL FIELD AGAINST TENDER ENQUIRY NO. PROC-SERVICES/LCB/RMD-3306/2018

We are pleased to issue subject tender enquiry to you as a pre-qualified Consultant to submit your technical & financial bid proposal on the terms and conditions of Tender Document.

1. INTRODUCTION

Oil and Gas Development Company Ltd (OGDCL) is Pakistan's leading E&P sector company, having operations at about 50 locations and fields in all the four provinces. The Company is listed and traded on Pakistan stock exchange with highest market capitalization. Recently the Company, through GDR process, has also been listed on London Stock Exchange. More details about the Company can be obtained from its website www.ogdcl.com.

2. OBJECTIVE

OGDCL Intends to hire subject Services as per Annexure-A. Interested bidders are required to submit their bids strictly as per Terms of Reference (TOR) / scope of work (Annexure-A) and instructions to bidders given in this tender document.

3. Sealed bids are hereby invited under **Limited Competitive Bidding (LCB) procedure** from eligible bidders from the countries maintaining bilateral trade relations with Pakistan for Services as listed in the Schedule of requirement "Annexure-A" of the attached Tender Documents. **The prices may be quoted as per details mentioned in TOR "Annexure-A".**

4. PROSPECTIVE BIDDERS SHOULD PARTICULARLY NOTE THAT:

4.1 Bids will be accepted only if the materials / services and supplies being offered are produced and manufactured in the country(s) maintaining bilateral relations with Pakistan.

4.2 **Each bid valid for minimum 180 days** from the date of opening of the bids must be accompanied by a Bid Bond in the form of a cash deposit receipt, a Bank Draft or a Bank Guarantee issued by scheduled Bank of Pakistan or a branch of foreign bank operating in Pakistan, except NIB Bank, for an amount mentioned in Annexure "B" and valid for **210 days** from the date of opening of bids. The Bank Guarantee will be issued by a scheduled Bank, except NIB Bank, in accordance with the format as per Annexure-B of the tender Documents.

4.3 Bid Bond through telex / fax shall not be acceptable.

4.4 On acceptance of the bid by the Purchaser the successful bidder shall be required to furnish Performance Bond / Bank Guarantee for an amount equivalent to 10 % of the Contract value for the required Services in US Dollars or in currency of Bidder or equivalent in Pakistan Currency as per Annexure-C.

5. The Purchaser does not take any responsibility for collecting the bids from any Agency. Your authorized representative may attend the Tender opening if desired. The request for extension of closing date and time shall not be entertained and tender received after closing time or date shall be returned to Bidder unopened.

6. The Purchaser reserves the right to increase or decrease the quantities / Scope of Work and accept or reject any or all bids or cancel any or all items at anytime without assigning any reasons thereof.

7. The Purchaser reserves the right to have the items inspected by its own representatives or through third party, wherever applicable.

8. It must be indicated in the offer that the quotation fully conforms to Technical Specifications and Terms & Conditions of the Tender Enquiry.

9. TIME AND PLACE FOR SUBMISSION FO BIDS.

Bids must be delivered / dropped in the tender box / OGDCL reception at time & date mentioned in Annexure "A" at the following address:-

Manager (SCM) Services

Oil & Gas Development Company Limited
Supply Chain Management Department
OGDCL House, Plot No. 3 (New No. 3013) F-6/G-6,
Jinnah Avenue, Islamabad (Pakistan)
Phone No. 92-51-92002 3652/ 3780
Email: ejaz_rizvi@ogdcl.com

10. OPENING OF BIDS

Bids will be opened at the time and date mentioned at Clause-34 on the place noted above.

11. Any company registered at places e.g. Vigin, Cayman, Nausa, Jersey and Bohaman Islands shall not be entertained and bids if submitted shall be rejected.
12. **TWO ENVELOPE BIDDINGS**
 1. Bids against this tender are invited on **Single Stage Two Envelope Bidding Procedure**; therefore, the bidders shall submit one original and one copy of their Technical and Financial bid.
 2. Tender Annexure to be added in both the bids; UN-Priced with technical Bids & Priced with Commercial Bids.
 3. Both the bids shall be submitted simultaneously in separate sealed inner and outer envelopes. The envelope containing Technical Bid must be marked clearly "**Technical Bid**" and containing Financial Bid must be marked clearly "**Financial Bid**" along with indication on the envelopes as "ORIGINAL" and "COPY".
13. The Technical Bid will be opened at first and evaluated. The Financial Bid of only those bidders will be opened who are declared technically Responsive.
14. The Financial Bid must be complete in all aspects and comparable. Conditional Prices and/or Prices mentioned other than Rate Format/Financial Evaluation Criteria, may not be accepted. In case, the Bidder is not charging any rate and/or the rates are not applicable, Zero (0) must be clearly mentioned, failing which, the bid(s) may be considered as non-responsive.
15. The contract / service order will remain valid till completion of job / period specified in Terms of Reference (TOR) at Annexure "A". Any extension in validity of contract / service order will be subject to written mutual consent of both the parties.
16. The interested bidders must confirm their willingness to submit bid proposals at least ten (10) working days before the last date for bid submission, giving complete mailing address, email etc.
17. No alternation in OGDCL's uploaded tender documents is allowed. Any attempt for alteration/amendment in the tender documents may lead to disqualification of the bidder.
18. The Bank Guarantee, in any form, issued by NIB Bank shall not be accepted.

(Syed Ejaz Abbas Rizvi)
Manager Services
Oil & Gas Development Company Limited
Phone: 0092-51-92002 3652/ 3780
Email: ejaz_rizvi@ogdcl.com

INSTRUCTIONS TO BIDDER

1. PROSPECTIVE BIDDERS SHOULD PARTICULARLY NOTE THAT:

- 1.1 **Bids valid for minimum of 180 days** from the date of opening of bids, must be accompanied by Bid Bond (to be attached with **Technical Proposal**) in the form of a Bank Guarantee for an amount of USD/Pak Rupees(*mentioned at Clause-31*) and valid for **210 days** from the date of opening of bids. The Bank Guarantee should be issued by a Pakistani Scheduled Bank or branch of a foreign bank operating in Pakistan, except NIB Bank, in accordance with the Format at **Annexure-“B”**.
- 1.2 Bid Bonds through fax shall not be acceptable.
- 1.3 On acceptance of Bid by the purchaser, the successful Bidder shall, within 15 days of the receipt of Letter of Intent (LOI) furnish an acceptable performance Bond/Bank Guarantee for an amount equivalent to 10% of the total contract value in US\$ or equivalent in Pak Rupees, issued by Pakistani Scheduled Bank or Branch of a Foreign Bank operating in Pakistan, except NIB Bank, in accordance with the Format at Annexure-C.
- 1.4 The Terms and Conditions form an integral part of Tender Enquiry and must be taken into consideration before submitting your quotation.
- 1.5 The Purchaser does not take any responsibility for collecting the Bids from any Agency. Your authorized representative may attend the Tender Opening if desired. The requests for extension of closing date and time shall not be entertained and tender received after closing time or date, shall not be accepted and returned to Bidders unopened.
- 1.6 The purchaser reserves the right to increase or decrease the quantities /scope of work to a reasonable percentage and accept or reject any or all bids or may cancel any or all items at any time without assigning any reasons therefore.

2. THE BIDDING DOCUMENTS COMPRISE OF THE FOLLOWING:-

- a) Instructions to Bidders
- b) Terms of Reference / Scope of Work, (Annexure-A)
- c)Format of Bid Bond (Annexure-B).
- d) Format of Performance Bond/ Bank Guarantee (Annexure-C)
- e) Format of Bidding Form(Annexure-D)
- f) Format of Integrity and Ethics undertaking (Annexure-E)
- g) Affidavit for Not Black Listing (Annexure-F)
- h) Draft Contract /Draft Service Order (Annexure-G)

3. TIME AND PLACE FOR SUBMISSION OF BIDS

Sealed Bids in duplicate as per clause-18 of Instructions to bidders given in this document must be delivered / dropped in the office detailed as per time and date given at Clause-34.

4. OPENING OF BIDS

Bids will be opened at OGDCL House, Islamabad, as per time and date given at Clause-34.

5. PREPARATION OF PROPOSAL

Bidders will prepare their bids in two parts i.e. Technical Proposal (Part-I) and Financial Proposal (Part-II). Technical bid shall consist of one original and one copy, whereas, financial bid shall consist of one original bid only and should be sealed in separate envelopes.

TECHNICAL PROPOSAL: should demonstrate firm's capability to provide the required Services and its understanding of the requisite tasks set forth in the Tender Document. Availability of the following information / documents in the technical proposal must be ensured for proper evaluation of the bid.

(i). Requested information/ sheets, in full with reference to the instructions given in **Terms of Reference/ Scope of Work** at Annexure-**"A"**.

(ii). Background, organization and experience of bidding firm and of any firm that would be associating with for the purpose of providing the services for this project/contract. A list of past and present major work(s) of similar nature / type i.e. carried out, or being carried out, by bidding and associate firm, if any with evidence in shape of work completion certificate or duly signed contract.

(iii). General approach or methodology proposed for carrying out job including all detailed information, as may be deemed relevant.

(iv). Unpriced draft agreement.

(v). Unpriced copy of financial bid.

If the bid is submitted by a joint venture of two or more companies, then the portion(s) of the project work to be carried out by each joint venture partner shall be very clearly identified.

Name, qualification, employment record and detailed professional experience of each expert, to be assigned for providing the proposed services, with particular reference regarding similar assignments undertaken by the bidder should also be provided in the bid. In proposing the personnel for this work, it will be encouraged to associate with domestic contractor(s) who are qualified to provide part of the services required.

Association agreement shall have to be produced by the joint venture partners accepting responsibility for the successful completion of the project separately and jointly.

FINANCIAL PROPOSAL: Financial Proposal should contain:

- (i) This tender document, duly signed and stamped by the bidder.
- (ii) Duly filled in "Format For Rates" in accordance with instructions given in **Terms of Reference /Scope of work (TOR)** at (Annexure-"A").

All pages of the bid proposal shall be signed and stamped by duly authorized representatives of the bidder. Proof of authorization shall be furnished in the form of valid written power of attorney, which shall accompany the bid. The person signing the bid shall initial all pages of the bid where entries are made.

BID PRICE:

- a. Bid shall be inclusive of all taxes, duties, levies, and charges except Provincial Sales Tax (PST)/Islamabad Capital Territory (ICT) Tax on services. Provincial Sales Tax (PST)/Islamabad Capital Territory (ICT) Tax on services where applicable will be paid by OGDCL.
- b. The prices should be quoted in USD. However, payment to all Pakistan based companies will be made through cross cheque in 100% Pak Rupees, at actual, against verified invoices at official exchange rate prevalent on the date of payment.
- c. For Foreign based Companies, the payment will be made in US\$, at actual against verified invoices through Irrevocable Letter of Credit (LC).
- d. The prices charged by the successful bidder (contractor) for required services shall not vary from the prices quoted by the service company.

6. COST OF BIDDING.

The bidder shall bear all costs associated with the preparation and submission of his bid and OGDCL will in no case be responsible or liable for those costs, regardless of the outcome of the bidding process.

7. ADDITIONAL SERVICES

Contract price will be subject to adjustment as a result of addition/reduction in scope of work. However, unit price quoted for such work shall be used as base price for computation of final invoice. Contractor should take approval for such changes in writing from OGDCL. Rates and quantum of any additional job, not covered in the scope of work shall be subject to approval of OGDCL.

8. UNSKILLED LABOUR

Unskilled labor for handling tools and equipments will be on account of bidder.

9. LANGUAGE OF BIDDING

The bid must be prepared and submitted in the English language. Supporting documents and printed literature furnished by the bidder with the bid may be in another language as long as they are accompanied by an English translation of the pertinent passages. For the purpose of interpretation of the Bid, the English language shall prevail.

10. BID VALIDITY.

10.1 **The Bid shall remain valid and open for acceptance for a period of 180 days from the specified date of tender opening.**

10.2 In exceptional circumstances prior to expiry of the original bid validity period, the bidder may be requested in writing for an extension of the period of

validity. A bidder agreeing to such request will not be permitted to modify his bid.

11. ALTERNATIVE BIDS.

- 11.1 In the event that the bidders submit an Alternative bid(s) whether in whole or against any of the items, a group of sub group, in addition to its Main Bid, the bids must be marked as “**Main Bid**” and “**Alternative Bid**”. Alternative Bids which don’t conform to the specifications may be submitted. However, only the Alternative bid of the Bidder whose Main Bid is the lowest evaluated bid will be considered.
- 11.2 A Bidder, who wishes to have its Alternative bid(s) considered on an equal basis with all other (Main) bids, must submit a **Bid Bond** for each Alternative bid. An Alternative bid must be submitted in a sealed envelope clearly marked “**Alternative Bid**”, separate from the Main bid.

12. BID BOND.

- 12.1 The bidder shall furnish with the **Technical bid proposal**, as part of his bid, a bid bond for an amount of US\$ /Pak Rupees (*mentioned at Clause-31*).
- 12.2 The Bid Bond in the form of a cash deposit, a Bank Draft or a Bank Guarantee issued by scheduled Bank of Pakistan or a branch of foreign bank operating in Pakistan, except NIB Bank, for an amount mentioned in **Annexure “B”** and valid for 210 days from the date of opening of bids. The Bank Guarantee will be issued by a scheduled Bank in accordance with the format as per Annexure-B of the tender Documents.
- 12.3 Any bid not accompanied by the requisite Bid Bond is likely to be declared non-responsive. The bid bond of unsuccessful bidders will be returned. The bid bond of the successful bidder shall be discharged after he has executed the contract.
- 12.4 The bid bond may be forfeited if a bidder withdraws his bid during the period of bid validity or if the Bidder, having been notified of the acceptance of his bid by the Company during the period of bid validity:
- 12.4.1 Fails, refuses or delays to execute the Contract in accordance with the instruction to Bidders, or
- 12.4.2 Fails, refuses or delays to furnish Performance Bond in accordance with the instruction to Bidders.

Note:

“As regards to the requirement of Bid Bond, PPRA rule does not distinguish between any private or public entity, therefore, bidders are required to submit bid bond irrespective of their status as private bidder or public sector bidder”.

Non submission of bid bond of required value by the bidders shall summarily result in disqualification of their bid.

13. AMENDMENT OF BIDDING DOCUMENTS.

13.1 At any time prior to the deadline for submission of Bids, OGDCL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by amendment.

13.2 The amendment shall be part of the Bidding Documents, and will be notified in writing through fax or letter to all prospective bidders who have received the Bidding Documents, and will be binding on them.

14. CLARIFICATION(S) / QUERIES OF TENDER

The bidders are expected to carefully examine all instructions, forms and specifications in the Bidding Documents. Any bidder in doubt as to the exact meaning or interpretation of any part of the Bidding Documents should immediately seek clarification in writing from;

**Manager (SCM) Services
Oil and Gas Development Company Ltd,
Jinnah Avenue, Islamabad, Pakistan
Phone #. 0092-51-920023652/ 3780
Email: ejaz_rizvi@ogdcl.com**

For requests of all clarifications in regard to the information contained in Tender Documents made over the telephone shall not be entertained. All inquiries about the tender made to OGDCL and OGDCL's response will be made known to other bidders without disclosing identity of the bidder who made the enquiry.

15. CONTRADICTIONS, OBSCURITIES AND OMISSIONS

The Bidder should likewise notify the above of any contradictions, obscurities and omissions in the Bidding Documents if clarification of these is necessary for the clear understanding of the documents and for preparation of the bid. Such enquiries, clarifications, queries with reference to clause - 14 above must reach the above named not later than two weeks before the bid submission date otherwise the same will not be responded by OGDCL.

16. DEADLINE FOR SUBMISSION OF BIDS.

16.1 The original bid, together with the required copies must be delivered to OGDCL at the address specified in clause-18, not later than the time and date specified under Clause-34.

16.2 OGDCL may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause-13, in which case all rights and obligations of OGDCL and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

16.3 Bids will be opened in presence of the bidder's representative who chooses to attend the bid opening at the time and date mentioned in the Tender Notice or on the extended date with reference to clause - 16.2.

16.4 The envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "LATE".

- 16.5 If the envelopes are not marked as instructed below, OGDCL will assume no responsibility for the misplacement or premature opening of the bid.
- 16.6 In case due date bids opening falls on holidays, the bid will be opened on next working day.

17. MODIFICATIONS AND WITHDRAWAL OF BIDS.

- 17.1 Bidder may modify or withdraw his bid after submission, provided that written notice of the modification or withdrawal is received by OGDCL prior to the prescribed deadline for submission of bids.
- 17.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched as for the bid.
- 17.3 No bid shall be modified subsequent to the deadline for submission of bids and before the expiry of the period of bid validity.
- 17.4 No bid shall be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of bid validity.

18. SEALING, MARKING AND TRANSMISSION OF THE BID

- 18.1 Your detailed "Technical Proposal" and "Financial Proposal" should be submitted in one original and one copy of each in separate envelopes. The envelopes containing Technical and Financial Proposals shall be properly sealed, stamped and marked as follows:

(a) Bid against TENDER ENQUIRY NO. *(Mention from Clause-34).*

Do not open before *(Mention from Clause-34)* **Hours (PST) of Bid opening date** *(Mention from Clause-34).*

TECHNICAL PROPOSAL

(Description Mention from Clause-34)

Manager (SCM) Services

OGDCL House, Jinnah Avenue, Islamabad.

Ph: # 051-92002 3652/3780,

(b) Bid against TENDER ENQUIRY NO. *(Mention from Clause-34)*

Do not open before *(Mention from Clause-34)*

Hours (PST) of Bid opening date: *(Mention from Clause-34)*

FINANCIAL PROPOSAL

(Description Mention from Clause-34)

Manager (SCM) Local/Services

OGDCL House, Jinnah Avenue, Islamabad.

Ph: # 051-92002 3652 / 3780

- 18.2 If the envelope is not marked as instructed above, OGDCL will assume no responsibility for the misplacement or premature opening of the bid.
- 18.3 In addition you should advise by fax to OGDCL of the dispatch of your proposal.

19. LATE BIDS

Any Bid received after deadline for submission of Bids prescribed by OGDCL pursuant to Clause- 16 above will be rejected and returned unopened to the bidder.

20. BID OPENING

The Bid shall be opened publicly in the Procurement Department of OGDCL by the Tender Opening Committee in the presence of Bidder's representatives who choose to attend the bid opening at the time and date specified at Clause-34 or on the extended date with reference to clause- 16.2 above.

21. EVALUATION OF PROPOSALS.

Technical proposal of the bid shall be reviewed first to determine / check its technical responsiveness and conformity with the requirement of bid. The technical evaluation shall be carried out on the basis of information /data spelled out at Annexure "A"/ITB provided with this document. Technically responsive and financially evaluated bidder in line with the bid evaluation criteria given in the scope of work /TOR will be considered for award of job.

22. CRITERIA FOR SUMMARY REJECTION.

Bidder should ensure to submit their bids meeting following summary criteria failing which their bids are likely to be considered non responsive for detailed evaluation.

22.1 The Bid must be prepared in the English Language.

22.2 The Bid must be unconditionally valid for **180 days** from the date of Bid Opening.

22.3 The Technical bid must be accompanied with the duly signed and stamped "Bidding Form" given at Annexure "D" of the tender documents without any exception/deviation.

22.4 Bids should not be submitted in the form of Telex or Telegram.

22.5 Bid must reach before as mentioned in the Tender Notice or as per clause-16.

22.6 Technical Bid must be accompanied by a bid bond as specified in Clause – 12.

22.7 Direct fax bid shall not be acceptable. However, fax bid in sealed envelope confirming all other formalities as stated above will be acceptable provided original bid is received by OGDCL within 07 days of the Bid Opening Date failing which such bid will be considered non-responsive.

22.8 The bid proposal should essentially include C.Vs of the professionals expected to be deployed for the job (if required).

22.9 The Purchaser will evaluate and compare only the substantially responsive bids.

22.10 Bids determined to be substantially responsive will next be checked for any material error in computation.

22.11 Technical bid must be accompanied by Affidavit (Annexure-F) for Not Black Listing on Non-Judicial Stamp Paper of Rs. 100/-. The procedure of Black Listing is available at OGDCL website at following link:

<http://ogdcl.com/uploads/tender/BlackListingProcedure.pdf>

23. CLARIFICATION OF BIDS.

To assist in the examination, evaluation and comparison of Bids OGDCL may at its discretion, ask the Bidder for clarification of his Bid. All responses to request for clarification shall be in writing, and no change in the price or substance of the Bid shall be sought, offered or permitted.

24. ELIGIBILITY AND QUALIFICATION REQUIREMENTS

- 24.1 To be eligible for award of contract, bidders shall have to provide satisfactory evidence to OGDCL of their eligibility, capability and adequacy to carry out the contract effectively up to the end. All bids submitted shall include updates of the information on technical capability and firm's history that includes experience, list of similar projects carried out as per requirement of the Scope of work / TOR.
- 24.2 Proof of requirements mentioned at Sub-clause-24.1 must be submitted by the bidder along with the bid.
- 24.3 Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements:
- 24.3.1 The bids, and in case of a successful bid, a Form of Agreement shall be signed so as to be legal binding on all partners.
- 24.3.2 One of the partners shall be nominated, as being in charge and its authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.
- 24.3.3 The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the contract including payment shall be done exclusively with the partner in charge.
- 24.3.4 All partners of the joint venture shall be jointly and severally responsible for the execution and completion of the contract in accordance with the contract terms and conditions. A relevant statement to this shall be included in the authorization mentioned under clause-24.3.2 as well as in form of bid and the form of Agreement (in case of successful bid). A copy of the agreement entered into the joint venture partners shall be submitted with the bid.

25. COMPANY'S RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS.

OGDCL reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the effected bidder or bidders or any obligation to justify the affected bidder or bidders of the grounds for OGDCL's action.

26. GENERAL TERMS AND CONDITIONS.

- 26.1 After opening the bids, OGDCL will determine whether each bid is substantially responsive to the requirements of the Bidding Documents.
- 26.2 OGDCL will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required experience certificates/ evidence, sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- 26.3 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figure, the amount in words shall prevail.

- 26.4 A substantially responsive bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation. A material deviation is one which being inconsistent with the Bidding Documents, affects in any substantial way the scope, instruction to Bidders, quality or prescribed completion schedule or which limits in any substantial way, OGDCL's right or the bidders' obligation under the Contract.
- 26.5 A bid determined to be non-responsive will be rejected by OGDCL and shall not subsequently be made responsive by the Bidder by correction of the non-conformity.
- 26.6 OGDCL may waive any minor deviation non-conformity or irregularity in a bid, which does not constitute a material deviation, provided that the waiver does not prejudice or affect the relative standing order of any Bidder.
- 26.7 To assist in determining a bid's responsiveness the Bidder may be asked for clarification of his bid. The Bidder is not permitted, however, to change bid price or substance of his bid.
- 26.8 The evaluation of the bids will take into account, in addition to the bid price, the following factors:
- a) Reliability and efficiency of the offered Service.
 - b) Financial standing of the supplier.
- 26.9 The award of the Contract/Service Order shall be made to the Bidder whose bid has been determined to be the lowest evaluated bid, after considering all factors and who meets the requisites of Schedule of Requirement (Scope of Work/Bid Format).
- 26.10 The purchaser shall notify by fax/letter, the successful bidder of its intent to enter into a contract. The contract shall be executed only after all necessary management/Governmental approvals have been obtained.
- 26.11 The bidders may lodge a written complaint for redressal of their grievances and disputes to Committee for Redressal of Grievances & Settlement Dispute within fifteen (15) days of the placement of the Technical Evaluation Report on the web.

27. PERFORMANCE BOND / BANK GUARANTEE

- 27.1 Within fifteen (15) days of receipt of the notification of contract award, the successful bidder shall furnish to OGDCL, the Bank Guarantee / Performance Bond for an amount equivalent to 10% of contract value as per specimen at "Annexure-**C**".
- 27.2 The bank guarantee / performance bond shall remain valid and in full force and effect during validity of the contract.
- 27.3 The validity of Bank Guarantee / Performance Bond shall be extended by the contractor if the completion of contract is delayed, whether in whole or in part.
- 27.4 The cost incurred for establishing the Bank Guarantee / Performance Bond or any extension thereof shall be to the account of the contractor.
- 27.5 The Bank Guarantee / Performance Bond will be discharged after completion of the contract.
- 27.6 The Bank Guarantee must be as per format attached at Annexure-**C** and must be either from a Pakistan scheduled bank or from a branch of foreign bank operating in Pakistan, except NIB Bank, acceptable to OGDCL.

27.7 The proceeds of the Performance Bond shall be payable to the company (OGDCL) as compensation for any loss resulting from the contractor's failure to complete its performance obligations under the contract.

28. EMPLOYMENT OF PAKISTANI NATIONALS:

28.1 The Contractor will be required to employ Pakistani Qualified & experienced nationals in its operation if available. In order to employ the expatriate professionals if needed, the contractor will ensure that all out efforts have been exhausted to employ Pakistani qualified nationals. Unskilled workers if needed for the operation will be hired from the area where the operation is being performed.

28.2 In case of non availability of qualified / experienced Pakistani nationals for the contractual services, the contractor will reasonably make efforts to train Pakistani nationals in such a manner to replace gradually the expatriate professionals.

29. SIGNING OF CONTRACT

Within 15 days after notification to the successful bidder regarding acceptance of his bid, the contract incorporating all agreements between the parties will be signed.

30. SOURCE OF FUNDS.

The Project will be financed out of funds of the Company (OGDCL).

31. AMOUNT OF BID BOND

Amount of bid bond referred to in Clause-12 of Instruction to Bidders, and Annexure-"B" of this tender enquiry shall be **PKR: 1,150,000/- (Pak Rupees One million One Hundred Fifty Thousand Only).**

32. DEADLINE/ TIME AND PLACE FOR SUBMISSION OF BIDS (REFER CLAUSE-34 OF INSTRUCTIONS TO BIDDERS):

Sealed bids as per Clause-18 of Instructions to bidders of this tender enquiry must be delivered / dropped in the office detailed therein until **1100 Hours** Pakistan Standard Times ("PST") on **May 22, 2018.**

33. OPENING OF BIDS (REFER CLAUSE-34 OF INSTRUCTIONS TO BIDDERS).

Bids will be opened at **1130 Hours** ("PST") on **May 22, 2018** at OGDCL House, Islamabad, Pakistan.

34. SEALING, MARKING AND TRANSMISSION OF THE BID (REFER CLAUSE -18 OF INSTRUCTIONS TO BIDDERS).

34.1. Your detailed "Technical Proposal" should be submitted in one original and one copy, whereas and "Financial Proposal" should be submitted in original only in separate envelopes. The envelopes containing Technical and Financial Proposals shall be properly sealed, stamped and marked as follows:-

(a) Bid against TENDER ENQUIRY NO: **PROC-SERVICES/LCB/RMD-3306/2018**

Do not open before **1130 Hours** (PST) of Bid opening date: **May 22, 2018**

TECHNICAL PROPOSAL

SERVICES FOR FIELD DEVELOPMENT & RESERVOIR SIMULATION STUDY OF MELA OIL FIELD

Manager (SCM) Services

OGDCL House, Jinnah Avenue, Islamabad.

OGDCL Tender Enquiry No. PROC-SERVICES/LCB/RMD-3306/2018

Ph: 051-92002 3652/ 3780

(b) Bid against TENDER ENQUIRY NO: **PROC-SERVICES/LCB/RMD-3306/2018**

Do not open before **1130 Hours** (PST) of Bid opening date: **May 22, 2018**

FINANCIAL PROPOSAL

SERVICES FOR FIELD DEVELOPMENT & RESERVOIR SIMULATION STUDY OF MELA OIL FIELD

Manager (SCM) Services

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TERMS OF REFERENCE FOR
HIRING OF SERVICES FOR FIELD DEVELOPMENT
& RESERVOIR SIMULATION STUDY
OF MELA OIL FIELD

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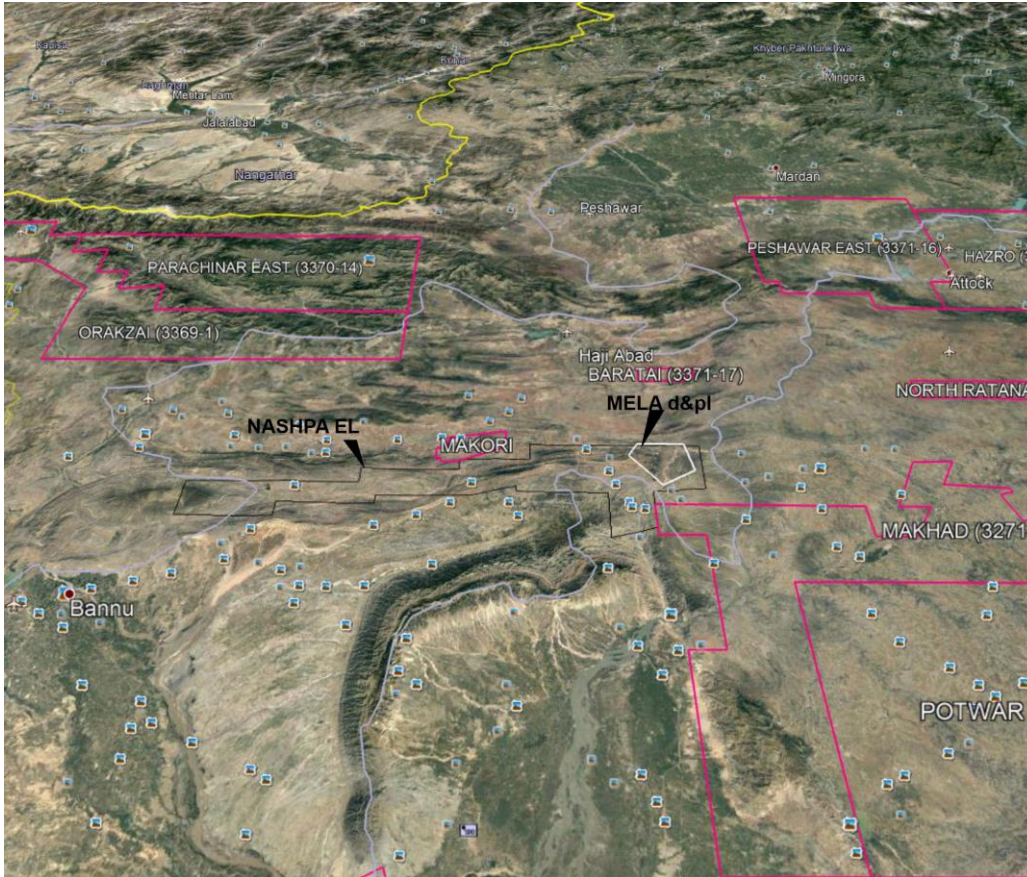
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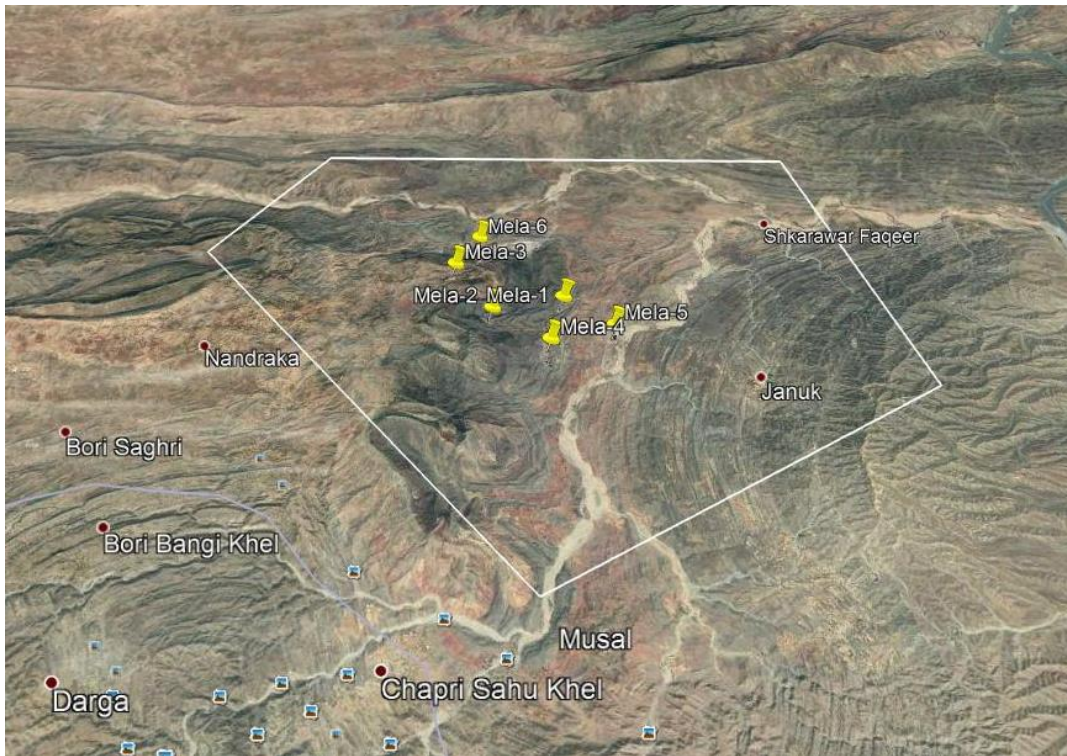
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1. INTRODUCTION

Nashpa Concession was awarded by President of Islamic Republic of Pakistan to the joint venture of OGDCL (65%), PPL (30 %) and GHPL (5 %) with effect from April 15, 2002 for the initial term of three years. Nashpa concession, covering an area of 979.69 Sq. km is located about 180 KM WSW of Islamabad in district Kohat of Khyber Pakhtunkhwa province and district Attock & Mianwali of Punjab province. As per PCA after one year Joint Venture relinquished 200.75 sq.km area (20%) and retained 778.94 sq.km area. Location Map Mela Field has been shown at Figure below. Later D&PL over Mela Field, covering 77.57 square kilometers has been awarded to Nashpa JV in April 2013 for a period of fifteen years.





So far, five wells have been drilled on the structure and one well (Mela-6) is under drilling. Two wells (Mela-2 & Mela-4) are producers, whereas Mela-1 & Mela-3 are P & A due to some mechanical problems. Mela-5 has been recently successfully tested in Datta formation at the rate of 950BOPD & 5.5 MMSCF of gas on 36/64" choke. Now this well is under completion in Datta Formation. Mela-2 and Mela-4 are currently producing through Naturally Fractured Carbonates (Lockhart Formation) whereas Mela-5 is under completion in Clastic (Datta Formation). Brief history of the wells is as follow.

1.1. Drilling of Mela-1

After undertaking G&G studies Nashpa JV agreed to drill an exploratory well Mela-1 and was spud in on April 11, 2005 with the target depth of 4700 meters. The reservoirs anticipated in this well were Datta, Lumshiwal + Hungu & Lockhart Formations. The well successfully encountered all these reservoirs which were found hydrocarbon bearing. No oil water contact was found in any reservoir. Each reservoir was tested and found hydrocarbons bearing. The well was completed in Lockhart formation due to high flowing rates observed during testing. The cumulative production of well is 9.3 MMSTB of oil and 34.8 BScf. The PVT analysis of the fluid from surface sampling of this well was carried out. The measured bubble point pressure was 5522 psi while the initial reservoir pressure was measured as 9558 psi.

Well ceased to flow in June 2017, Work over job with Rig was carried out on September 29th, 2017 to clear the obstruction (casing collapsed at 2416MMd), then recompleting the well, but after several attempts of penetration could not be possible beyond 2419.5mMD. Finally, Well (Mela-1) was P & A. The cumulative production of Mela-1 is 9.351 MMSTB of oil and 34.525 Bcf of gas on June, 2017.

1.2. Drilling of Mela-2

Mela-2 was drilled as an appraisal well down to 5326 meter in Lockhart Formation. In this well Datta Formation could not be penetrated as Lockhart Formation was encountered 250 meter deeper from prognosed and due to its increased thickness (i.e. 612 M). Two DSTs were planned, one in open hole from 5108-5158 meters to test the potential of the lower part of the Lockhart. During open hole DST, no reservoir fluid surfaced. Second DST was conducted in upper part of the Lockhart formation and successfully tested hydrocarbon and DST results are shown in the

table-3. The maximum oil and gas production was tested at the rate of 4000 bbl/day and 5 MMSCFD respectively.

The cumulative production of this well is 3.662 MMSTB of oil and 12.093 Bcf of gas on Nov 31st, 2017. At present the well is producing with an average production of 220 STBPD and 2.078 MMSCFD gas.

1.3. Drilling of Mela-3

Mela-3 well was drilled to further appraise the Mela structure. This well also went 615meter structurally down at Lockhart level and only 132 meter of Lockhart Formation could be penetrated due to hole size limitations. This well was tested at the rate of 410 STBD and 1.5 MMSCFD gas in Lockhart Formation. The cumulative production of this well is 0.306 MMSTB of oil and 0.816 BCF. In order to revive production from well, Nashpa JV has decided to deepen the well further 100m in Lockhart Formation. Work over Job with Rig was commenced on Mela-3 on 30-12-2017, however completion of this well could not be retrieved and finally the well had to declare P&A.

1.4. Drilling of Mela-4

Mela-4, the 1st development well was drilled in April 2013 to enhance the production of Field. Datta Formation again could not be penetrated due to poor hole conditions and well TD had to be declared in Shinawari Formation. During drilling, an open hole DST was conducted to test the potential of Lumshiwai Formation and the results were not encouraging. Finally after acquiring open hole logs, the well was completed in Lockhart Formation. The post completion results of this well were 1750 Barrels of oil and 9.59 MMSCF of gas. The cumulative production of well is 0.845 BBL of oil and 3.637 BSCF of gas on Nov 30st, 2017. At present the well is producing with an average production of 1120 STBPD and 4.5 MMSCFD gas.

1.5. Drilling of Mela-5

Mela-5 well was spudded on 25th September 2016 with the objective to exploit hydrocarbon resources of Jurassic reservoirs (Datta & Shinawari) and achieved its TD in Kingriali Formation. First DST in Datta Formation has been carried out and successfully tested at the rate of 950 BPD of oil and 5.5 MMSCFD of gas on 36/64" choke. The second DST has been carried out in SamanaSuk Formation to test the potential of SamanaSuk/Shinawari Formation. Upon testing, these reservoirs flowed 95 BOPD & 24MMSCF of gas at 32/64" choke. Later it was decided to carry out acid stimulation job, but no injectivity could be established. Finally the well has been completed in Datta Formation.

1.6. Drilling of Mela-6

Mela-6 well was spudded on 24th September 2017 with the objective to exploit hydrocarbon resources of Jurassic reservoirs (Datta & Shinwari) with a plan TD of 5412m MD in Datta Formation. Currently the well is under drilling in 12.5" hole section in Murree Formation.

2. OBJECTIVE OF THE STUDY

The main objective of this study is to carry out a detailed Reservoir Simulation Study to develop an optimum development strategy for the Mela Field, in order to maximize the oil/gas reserves by incorporating geophysical, petrophysical, geological, reservoir engineering, production engineering and production facilities data. The following are the objectives of this study:

- 2.1 Build Static Model using available geophysical, geological and petrophysical data. The consultant will review and incorporate the data from the wells drilled to date in the Mela D & PL (Mela-1, 2, 3 & 4) and the wells under drilling or planned to be drilled. Also the available VSP, 3D (PSTM/PSDM) & 2D (if required) seismic data will be used to generate time and depth structure contour maps on all the producing formations i.e. Datta, Shinawari, Samanasuk, Lamshiwai/Hangu and Lockhart formations. The consultant will

- also prepare a fracture network/distribution model in the 3D static model at all reservoirs levels by using image logs / seismic data, local tectonic data, analyze the different compartment of Mela field and extent of communication between these compartments.
- 2.2 Analyze the available production transient tests of reservoirs and log & geological data for reservoir characterization. This will include detailed log analysis of all available well logs, well test interpretations and other production testing data.
 - 2.3 Carry out basic reservoir engineering analysis including production tests, well test including PLT/PSP data and incorporate it in petrophysical modeling.
 - 2.4 Petrophysical modeling should capture the variability and trends in the data at fine scale and upscaled model levels and should be clearly established through graphs and displays during presentations/reporting.
 - 2.5 Apply Material Balance technique to estimate the OOIP and determine the drive mechanism and its strength. Also, review/analyze the production and pressure data for possible inconsistencies.
 - 2.6 Upscale, if required, however, the fine scale and upscaled model should be representative of the fine scale model. This should be achieved, by incorporating state of the art upscaling tools and confirmed through streamline simulation modeling. This should be presented before embarking on history matching exercise.
 - 2.7 Develop a representative Equation of State model based on available PVT lab data which can fully capture/predict the fluid properties. Also perform grid size sensitivity and clearly establish the optimum size to be used during the history matching phase.
 - 2.8 Initialize the simulation model using finite difference simulator, e.g. Eclipse etc. A clear comparison/matching of actual versus model predicted water saturation with depth along the wellbore should be established for acceptance of model initialization.
 - 2.9 Develop a representative 3D Compositional reservoir dynamic model for all the producing/tested reservoirs. Also, check if an equivalent black oil model can represent and capture the fluid flow behavior as it may save run times.
 - 2.10 Prepare a history matched model to full capture the quantities and trends of production and pressure matching parameters.
 - 2.11 Prepare a surface facilities network model to properly evaluate the future strategies and to identify possible bottlenecks and their remedies.
 - 2.12 Estimate the Original oil and gas initially in place (OOIP and GIIP) by volumetric method using newly generated static model for all reservoir formations and compartments, if applicable.
 - 2.13 Study, in close collaboration with client, different realistic development options to optimally exploit the Mela reservoirs while maximizing the reserves which may include but not limited to compression, fracturing, artificial lift requirement with timing, additional perforations, zonal isolations, dual/commingled production, completion strategy including well types i.e. vertical/deviated/horizontal wells, optimum well locations with expected incremental/ accelerated production from each of the reservoirs. Also identify the possible production enhancement opportunities in existing wells by using techniques like compression, fracturing, artificial lift (timing and requirement), additional perforations, commingled production, completion strategy, etc. to optimally drain the hydrocarbons.
 - 2.14 Carry out production (Raw and Sale both) forecasts (oil, gas, LPG and water production, WHFP) for various scenarios studied. Also, study possible augmentation of production facilities to maximize/accelerate recovery including but not limited to dehydration, LPG facilities, etc.
 - 2.15 Carry out feasibility of well head/ Nodal/ Front End field compression options for Mela Field with pressure and production forecast.

- 2.16 Perform the economic evaluation for each production forecast and recommend the optimum development plan for the field life.
- 2.17 The word “optimum” in the above paragraph covers the following:
- Should enhance production
 - Should improve estimated ultimate recovery (EUR)
 - Should be at the right time.
 - Should maximize value of the asset economic viability.
- 2.18 This study should provide the optimum production operating conditions for maximum hydrocarbon recovery including secondary and possible tertiary methods. Estimate Oil Original in-place (OOIP) and Gas Initial in-place and recoverable quantities of hydrocarbons (Oil, Gas, and LPG as appropriate) under proved, probable and possible categories for each reservoir as per PRMS definitions and provide certification of the same in 1P, 2P & 3P reserves, identify contingent resources and also quantify prospective resources as well.
- 2.19 Difference, if any in OOIP from Volumetric and Material Balance and simulation has to be resolved / justified.
- 2.20 Carry out studies on surface / subsurface facilities taking in consideration the additional wells to be drilled, work over, installation of desalting and dehydration facilities, artificial lift units, pumps and / or compressors for possible injection of water or gas for different production schemes in prediction runs.

3. SCOPE OF WORK OF STUDY

- 3.1 Review all available technical data of Mela Oil Field to develop reservoir characterization model for all the known reservoirs.
- 3.2 The data to be reviewed will include seismic data, geological data, core data (if any), well logs, well structure and stratigraphic correlations/cross sections, well tests data, BHP data, PSP data, PVT data, production data, completion histories and all relevant data related to the current or proposed well(s) drilling.
- 3.3 Carry out wellhead/field front end compression detailed requirements of Mela Field with pressure and production forecast (Three Backup Recycle compressors of 5 MMSCFD capacity have already been used at plant for low pressure gases in Mela Field.
- 3.4 Review the Mela, Field available data and develop a comprehensive Petrophysical & Geological model to perform 3-D, full field compositional reservoir simulation study for Mela, Field to achieve the optimum hydrocarbon recovery.
- 3.5 Review all in-house geophysical, geological, Petrophysical and engineering work on Mela Field.
- 3.6 The consultant will also incorporate all the relevant data of all the wells.
- 3.7 Prepare estimates of proven, probable and possible in-place and recoverable reserves of oil, gas and LPG for each reservoir as per guidelines of PRMS.
- 3.8 The study should include the feasibility study of well head/field front end compression, gas cycling, water injection and EOR techniques including CO₂, N₂ flooding if applicable to this reservoir and to provide possible development scenarios with economics evaluation.
- 3.9 The consultant will generate a comprehensive fracture distribution (fracture modeling) over the field and that model will be used in simulation model to see the relationship between matrix and fracture network. In all reservoirs and requirement of hydraulic fracturing of Lumshiwai / Hangu and Datta reservoirs at a suitable time during the production life of the well(s) if required.

The detailed scope of work is as follows: -

STAGE-I

4. DATA COLLECTION/INPUTS

- 4.1 For data collection a team of experts from consultant firm will visit OGDCL offices in Islamabad. The team will comprise at least three professionals one from each discipline i.e. Geology, Geophysics and Reservoir Engineering.
- 4.2 The team will review and scrutinize the data during their stay in Islamabad. They will provide report about the quality of available data.
- 4.3 The data obtained from the field during the study period will be provided continuously to the consultant to refine their work for a concrete recommendation for the full field development program.
- 4.4 Data collection must start within a week after signing the contract.
- 4.5 All geological, geophysical, drilling, production testing, pressure data, well logs, core and fluid analysis data required for study will be available to the consultant free of charge. Such material will be the property of OGDCL and data acquired by consultant during the study will be treated with utmost confidentiality. In this regard consultant will sign an agreement of confidentiality.
- 4.6 All such material / data will be returned to OGDCL at the completion of the study.
- 4.7 OGDCL will also provide adequate space to the consultant during their visit for data collection or presentation.

STAGE-II

5. GEOPHYSICAL & GEOLOGICAL ANALYSIS

- 5.1 Seismic interpretation of Mela Field structure is to be carried out over all the reservoir formations by using 3D seismic data (and 2D data wherever required), integrating all available geological / wells data. Time, Depth and Velocity contour maps are to be generated on all the reservoirs. Seismic interpretation should be performed on Geo Frame or Petrel Software of Schlumberger.
- 5.2 A Geological model should be established to determine the pertinent geological features and geometry of the reservoir in sufficient detail to allow an adequate description of the reservoir for reservoir simulation purposes. The available data will be provided to help in evaluation of geological interpretation and geological setting of the area.
- 5.3 After development of the Petrophysical / Geological model, import the available data in the geological modeling software (Geo Frame, CPS3, Tech Log and Petrel). Integrate / calibrate the interpreted seismic data (such as structural features and pick horizons) with the well data.
- 5.4 Build a consistent stratigraphic model by picking up the stratigraphic surfaces based on geological, geophysical and petrophysical information.
- 5.5 Construct the depositional model by combining the seismic (e.g. reflection strength attribute etc) FMI and well modeling data as well as using the regional information such as available geological reports showing environment of deposition to describe the geological features.
- 5.6 Static modeling of fracture attributes such as fracture intensity and orientation is undertaken. Static modeling involves regionalization of primary variables such as fracture intensity, permeability and porosity. Later, the fracture intensity modeling can be improved by available secondary information. Examples of secondary data include seismic, geometric (distance to faults and elevation), mechanical (lithology and rock strength), petrophysical (porosity).
- 5.7 The final geological model should be provided in the geological model software files.
- 5.8 The vertical and lateral dimensions of various formation units will be delineated independently by the consultant. The consultant will prepare structure and stratigraphic

cross sections using the logs, core, well site and other data and will determine the gas water contact (GWC) /oil water contact (OWC) specifying the transition zone.

- 5.9 For the purpose of reservoir description, the reservoirs / zones will be subdivided into a number of layers as per geological model. Following maps / interpretation data (both hard and soft) should be generated for every reservoir layer.
- i. Time structure maps on top of all producing reservoirs/layers on 1:25,000 scale.
 - ii. Depth structure maps on top of all producing reservoirs/layers on 1:25,000 scale.
 - iii. Isopach maps.
 - iv. Gross hydrocarbon maps.
 - v. Net hydrocarbon maps
 - vi. Net to Gross Ratio.
 - vii. Hydrocarbon pore volume maps.
 - viii. Effective porosity map
 - ix. Water saturation maps.
 - x. Facies maps
- 5.10 A Facies model is to be constructed for all hydrocarbon bearing reservoirs with the help of petrophysical analysis. The model should address the vertical and limited lateral distribution of different facies. A relationship between facies and reservoir quality / performance should also be established.
- 5.11 Geological model should be preferably prepared using software of GeoQuest (CPS-3, Stratlog, Petrel etc.). However if consultant uses some other software it will be his responsibility to provide the geological model output in a format compatible and loadable on above mentioned software / systems.

6. **PETROPHYSICAL ANALYSIS**

The Petrophysical properties of the reservoirs and aquifer will be determined by the quantitative log analysis and calibrations of core data, production test results, .The key objectives of this evaluation would be to determine the best possible estimation of reservoir properties .i.e. water salinity, porosity, water saturation, permeability, Sw Height Fun, fluid contacts, Net pay, Rock type/Facies, in order to be used in final geostatic/ dynamic reservoir model. Petrophysical model associated uncertainties and parameters, sensitivities should be well captured of each reservoir properties in defined workflow for hydrocarbon pore volume estimation.

- 6.1 All logs/core/mud logs will be analyzed independently. The basic data for all wells will be processed and interpreted independently. Normalization of the logs should be attempted wherever required. The whole interpretation should be carried out on Tech log software (Schlumberger) or any software compatible with OGDCL using software. In case of software used other than Tech log, consultant will provide the input/output files in format that are compatible with Tech log. The detailed workflow of the interpretation module should be provided by the consultant.
- 6.2 **Clay Parameter Selection:** Log data will be cross-plotted to establish various clay parameters. Statistical techniques will be employed in an attempt to establish clay types, and will be compared to any clay analyses that have been carried out in the laboratories.
- 6.3 **Shale Volume:** Shale volume will be calculated using, Gamma Ray and Neutron Density cross-plot methods as minimum requirements besides other indicators and as is applicable. If spectral gamma ray data is available, it will also be used. Core data should be used wherever available.
- 6.4 **Porosity Calculation:** Porosity will be calculated using multiple porosity log analysis. The calculated porosity will then be compared against core porosity to establish a log-core porosity relationship. This relationship will then be utilized to establish a core- derived

- porosity transformation for all the wells in the analysis. The consultant will be required to identify different rock types and produce transformation, correlations and curves for each rock type.
- 6.5 Permeability should be computed using different approaches based on available data (logs, cores and testing results). However, the derived permeability index from different approaches will be provided to OGDCL.
 - 6.6 Correlation between core and log derived data will be obtained.
 - 6.7 **Porosity-Permeability:** Cross-plots of K-Max and K-Horizontal of core versus log porosity will be created to establish relationship between permeability and log-derived porosity. These relationships will then be used to generate permeability logs for the zone of interest in all the wells evaluated.
 - 6.8 **Water Saturation:** For water saturation calculation different models should be attempted using different available methodologies to come up with most suitable model. Shale parameters will be chosen from cross-plot techniques and from the individual logs as required. Formation water resistivity will be established from Picket/Rwa techniques and compared to water analysis from tests from the field and from catalogue values as are available. Log based saturation height function should be attempt for saturation estimation by defining appropriate rock type relations and resulted saturation profile should be compared with initial reservoir condition wells.
 - 6.9 Cut-off sensitivities will be re-established in the light of oil/gas production and reservoir behavior.
 - 6.10 Based on SCAL and log data, reservoir characterization of all reservoir units will be established rock type/facies.
 - 6.11 The interpreted results will be used to determine original oil-water or gas-water contact. The transition zone should be correlated with capillary pressure results/pressure data.
 - 6.12 Standard conventional log analysis will be carried out with color output of corrected S_{xo} , S_w , Porosity, HCPV, BVM, Permeability, V_{sh} , moveable hydrocarbon, residual hydrocarbon etc.
 - 6.13 C.P.I outputs of graphical plot will be in color along with log derived permeability's. The plots will include produced formation analysis by volume (clay, matrix porosity, and fluid analysis) and average grain density meter by meter in a scale of 1.200. Six copies of each plot will be prepared. All plots/cross plots/ Pickett plots developed should also be provided to OGDCL with brief results on the same page.
 - 6.14 Computer processed interpretation tabular output will include S_{xo} , S_w , saturation of Hydrocarbon, V_{sh} , moveable hydrocarbon, grain density, $\Phi *h$, $\Phi *h*(1-S_w)$ and cumulative $\Phi *h (1-S_w)/BOI$ meter by meter.
 - 6.15 Optimum numbers for porosity, S_w and shale volume cut-offs will be determined by testing data at variable sensitivities.
 - 6.16 **Summary Tables:** A set of summary values for each zone in each well, listing pay, net pay, average porosity, water saturation, Hydrocarbon Pore Volume (HCPV), Bulk Volume of Water (BVW), porosity thickness, hydrocarbon thickness and permeability thickness will be generated, based on a series of cut-offs as supplied by the client. A maximum of twelve sets of summary values will be generated and included in the final report. Fluid contacts will also be re-established.
 - 6.17 Consultant will provide all the results on CD/DVD with summaries and Spread sheet/Excel data should also be provided in respective formats.
 - 6.18 Consultant will review the current logging suit and recommend any changes for future wells.
 - 6.19 Saturation height functioning modeling will be carried out for the wells where data is available.

6.20 J-function modeling (capillarity) for defining transitional zone saturation.

7. Basic Reservoir Engineering and Determination of Oil Initially in Place.

- 7.1 Contractor to review all the available PVT reports and develop PVT model in PVTi or PVTp or PVTSIM for completeness and examine for systematic variation of key properties for final input into the material balance software . The PVT and EOS modeling (simulation model on PETREL RE / Eclipse software) should be consistent with the requirement of history matching and prediction of Oil & Gas as being produced from the reservoirs.
- 7.2 The contractor will describe its approach to develop compositional simulation model including PVT and EOS modeling required for achieving the objectives of the study.
- 7.3 Formal agreements on PVT and EOS modeling should be made with OGDCL & JV Partner before proceeding for model initialization and history matching.
- 7.4 Considering the complex reservoir fluid behavior from different layers in the field, a highly experienced PVT modeler is required to work on the PVT and EOS modeling.
- 7.5 Review the Rock Properties data available on Mela, Field, and / or nearby field(s) for relative permeability and capillary pressure curves required for simulation model for each identified rock type.
- 7.6 All well test data will be reviewed and analyzed by the consultant for reservoir parameter estimations and model validation. The procedures to analyze the well test data should be clearly mentioned in the consultant's proposal. Proposals for future testing procedures & practices should also be submitted. The skin from well test analysis should be evaluated further and skin due to completion and damage should be estimated separately. Well test analysis software would be required for the analysis and preference should be given to Ecrin – Kappa software. In case other software is used, consultant would provide the compatible files of input/out of well test interpretation to Ecrin – Kappa.
- 7.7 The Permeability estimated from the short and long terms pressure transient analysis will be correlated with the log data as no core analysis is available for this field.
- 7.8 Review all the wells completions and suggest any change if required for increasing the deliverability.
- 7.9 Review the production data available for their completeness and accuracy to be used for Simulation and Material Balance. Also prepare validated well bore hydraulics models using Prosper Software to allow the simulator to account for the effects of the vertical flow system in conjunction with artificial lift in the predictive mode.
- 7.10 Calculate volumetric hydrocarbon in place for each geological layer. If a model layer consists of two or more geological layer, or a geological layer is subdivided in two or more model layers, the hydrocarbons in place to be estimated for each model layer as well. Total hydrocarbons in place has to be calculated using proper cut off(s) for porosity, water saturations and shale value with technical justification.
- 7.11 An estimate of hydrocarbons initially in-place of the producing and tested reservoirs should also be made through material balance using Matbal software and volumetric method and consultant should convert it into Matbal also if it has been carried out by Mbal (compatible files with Mbal as well).
- 7.12 The consultant will develop wellbore hydraulics models (using Prosper Model" and generate VFP tables for all the current and future wells covering all the possible wellbore flowing conditions including natural flow and flow through artificial lift methods. This information will be used in various scenarios for production optimization in the simulation model.

STAGE-III

8. RESERVOIR SIMULATION STUDY

8.1 Model Initialization:

- 8.1.1. A 3 Dimensional Compositional Reservoir Simulation model would be required for this study. The areal grid size and layering of reservoir will be dictated from the areal and vertical variation of the petrophysical properties, facies studies and structure of the reservoir.
- 8.1.2. The aquifer should be represented by proper cells in an appropriate (geological justifiable) direction. After the completion of the first phase of study (Geological Phase), the consultant will propose the X-Y grid of the reservoirs, the number of cells to represent the reservoir and number of model layers. This will be decided after discussion and satisfaction of OGDCL & JV Partners. A preprocessor run with all basic data and initial hydrocarbon in place obtained by the model is to be compared with that obtained by volumetric method and material balance. These values should be comparable. A sensitivity run with no production to be run for five years or till the stability to understand the smoothness of initial data.
- 8.1.3. All simulation work must be performed on PETREL based on ECLIPSE Simulator. In case Consultant want to do simulation on Eclipse using "data file", the consultant would have to convert the all finalized models to PETREL RE. The model on PETREL RE should have similar results to original eclipse results using "data file"

8.2 RADIAL MODEL STUDY:

- 8.2.1. At least one well will be selected for radial model study, to assess the coning behavior near the original contact(s). The selection of the well will be made in consultation with OGDCL/JV Partner's Reservoir Engineers.
- 8.2.2. The results will be analyzed to allow development of well bore pseudo permeability curves for break through response.
- 8.2.3. Prediction of each case up to ultimate recovery will be conducted to determine the behavior of the well as a function of time.
- 8.2.4. The calibration of the model will be made with the well test data available.

8.3 FULL FIELD SIMULATION STUDY:

- 8.3.1. The full field reservoir simulation model will be constructed by using all information from items above.
- 8.3.2. The location of hydrocarbon interfaces, the variation in pool composition and location of remaining producible hydrocarbons will be delineated.
- 8.3.3. Special emphasis will be given to high permeability layers during model construction and to study the behavior for any possible difficulty in reservoir management due to these.

8.4 FULL FIELD HISTORY MATCH

- 8.4.1 Prepare the recurrent data such as well specification, perforations, rates, log of completion etc. and also evaluate the need to make peace-man correction to pressure data before history matching.
- 8.4.2 Carry out history match runs using the most appropriate time steps to maintain the necessary accuracy and consultant's model stability.
- 8.4.3 Adjust the reservoir parameters as necessary (within acceptable limits) to get the best well by well history match. A log of all the changes made on the parameters in order to obtain acceptable history match should be intimated to OGDCL and all computer runs be kept in record for OGDCL & JV Partner's review.

- 8.4.4 Layer wise porosity, permeability, pressure and hydrocarbon saturation maps initially, in between and as well as at the end of history match will be provided to OGDCL. The match should account for all history parameters in addition to pressures.
- 8.4.5 Fully implicit model technique should be used in the single well, cross-sectional models and 3-D model studies to ensure the stability and accuracy of the solution.
- 8.4.6 The model should be able to perform accurately under stable conditions. The time step should be chosen in such a way which reduces the run time and proper convergence is achieved in shorter time.
- 8.4.7 Regardless of the number of the time steps proposed by consultant, an acceptable history match should be obtained. However, the proposed number of time steps should be maintained as a minimum.
- 8.4.8 Adequate saturation change and a pressure difference in successive time steps will be maintained in any cell in all simulation studies. The incremental material balance tolerance should not exceed 0.1 percent in all studies (single well, cross section and full field).

8.5 PERFORMANCE PREDICTION

Following the history matching phase, several prediction cases will be run as per the recommendation of the OGDCL & JV Partner.

- 8.5.1 Base case is the do nothing case and future performance of the reservoir(s) will be predicted based on the existing wells (at the time of the forecasts) and facilities.
- 8.5.2 Future performance of reservoirs with in fill wells, if some areas of the reservoir are not properly drained in the base case.
- 8.5.3 Future performance of reservoir with re-completion cases if some layers of the reservoir are not depleted in the base case.
- 8.5.4 Future performance of reservoir with in fill wells and re-completion if some areas of the reservoir and some layers are not drained in the base case.
- 8.5.5 Pressure Maintenance (gas cycling/water injection) for all above cases if applicable.
- 8.5.6 Prediction runs with well head and field compression.
- 8.5.7 The prediction runs of the full field model should not be done in a single go but rather segments. The criteria of such selection need to be discussed and agreed.
- 8.5.8 The consultant will recommend the optimum development, alternative and will run the prediction case till the abandonment criteria and calculate the ultimate recoverable reserves for the reservoir.
- 8.5.9 The optimum case will be selected after reviewing the results of all predication cases and discussions with OGDCL & JV Partners.
- 8.5.10 Deliverability and permeability thickness maps will be prepared, to be used for new wells.
- 8.5.11 In each prediction case optimum number of wells (vertical or/ and horizontal) will be investigated.
- 8.5.12 The consultant will provide at least the following parameters in each prediction run:
 - i. Field oil/condensate, gas, LPG and water production rate, field oil/condensate, gas, LPG, and water cumulative recovery, field oil/condensate, gas, LPG production potential, field hydrocarbon in-place, field GOR/CGR and Water Cut/WGR, reservoir pressure
 - ii. Well oil/condensate, gas, LPG and water production rate, well oil/condensate, gas, LPG and water cumulative recovery, well oil/condensate, LPG and gas production potential, well GOR/ CGR, water cut/ water-gas ratio, well block pressure, well bottom hole flowing pressure, flowing wellhead pressure,
 - iii. Number of additional production/ injection wells (vertical & horizontal), location and drilling time in all the reservoirs.
 - iv. Evaluate pressure maintenance scheme and time of pressure maintenance require

9. ENHANCED OIL RECOVERY

- 9.1 Consultant will screen the reservoir and production data of the field to select the optimum tertiary recovery method to maximize the oil/gas recovery from the reservoir.
- 9.2 Consultant will perform simulation run of the optimum EOR method. Number of simulation runs and other specifications will be decided with the consultation of OGDCL professionals.

10. DRILLING AND WELL COMPLETION

Study the feasibility of drilling new wells. Recommend optimum flow rates, completion size, and types (vertical or horizontal) of wells, wells locations and optimum artificial lift method for all reservoirs.

11. ECONOMIC ANALYSIS & EVALUATION.

- 11.1 For each 1P, 2P & 3P prediction case, economic analysis (NPV at different discount rates ROR/IRR (10%, 15% & 18%), Payout time and other profitability ratios) is required.
- 11.2 Yearly capital investment and revenue are to be agreed with OGDCL based on actual historical costs & future capex of Mela.
- 11.3 Based on the economic results, an optimum development plan should be provided by the consultant.
- 11.4 There will be a recommended plan of action to be followed to achieve maximum economic recovery based on the techno-economic analysis of the various prediction cases studied. The plan must include recommendations for reservoir management, subsurface and surface facilities for the life of the field.
- 11.5 Economics should be provided on both constant \$ & escalated \$ cases.
- 11.6 All economic inputs & outputs including production profiles are required in tabulated & graphical formats.

12. OGDCL PARTICIPATION AND SKILL TRANSFER

- 12.1 OGDCL & JV Partner Professionals will participate in performing the full field 3D Reservoir Simulation Study including Geophysical, Geological, Petrophysical, Geological Modelling, Basic Reservoir Engineering, building of static model, initialization, history matching, prediction runs and economics for their inputs.
- 12.2 Consultant will involve OGDCL & JV Partner professionals in all phases of study mentioned above.
- 12.3 OGDCL & JV Partners may like to have this study accomplish in association with its professionals **without any financial impact on the consultant**. The responsibility of the accomplishment of all kind of Work/Studies will be on the consultants. However, the OGDCL & JV Partner professionals in different disciplines will be attached with the consultant time to time for necessary inputs.
- 12.4 Reservoir Simulation study will be started after the mutual agreement of OGDCL & JV Partners and consultant on G & G model of the field.

13. REPORTS AND PRESENTATION

Phases of the Study

For proper reporting and presentation management study is divided into three phases i.e. I, II and III.

13.1.1 Phase I:

It covers the work done to make static model by using Geophysical, Geological and Petrophysical data. It also includes basic Reservoir Engineering analysis including different type of material balance, P/Z analysis, well test analysis and decline curve analysis for populating static model and volumetric estimates based on static model. Phase-I work need to be agreed upon prior to proceeding to Phase II.

13.1.2 Phase II:

This phase includes history match and proposed prediction runs for OGDCL & JV Partners approval. All aspects related to gridding, history match prediction runs would be agreed upon prior to proceeding to Phase III.

13.1.2 Phase III:

It consists of optimum revised development, depletion plans, economic analysis and reserve certification. All aspects have to be discussed and agreed upon prior to proceeding to the final presentation.

13.2 Reports

13.2.1 The consultant will submit at the end of every fortnight, a detailed fortnightly progress report to OGDCL in soft and hard form, covering the work performed during that period.

13.2.2 The consultant will submit both hard and soft copies of Draft reports for each individual phase (Phase-I, Phase-II and Phase-III) on its completion.

13.2.3 Final report of all phases will be submitted as one hard copy complete set for each JV partner (if any) and four hard copies complete set for OGDCL as a final copy of each phase as well as complete soft copies.

13.2.4 Final report for each phase (or as required) will be submitted to OGDCL (both hard & soft copies) after incorporating the suggested information/improvements within two weeks of oral presentation so that approval for next phase may be accorded.

13.2.5 A draft report (soft copy) for all three phases of the study should reach OGDCL at least two weeks ahead of oral presentation, which includes the results of that particular phase and all phases if final report. This is meant to combine the discussions on the layout of the final report with discussion of the Phase-III so that if everything goes smoothly, the submission of the final report will meet the target date.

13.2.6 After final presentation, the consultant will provide six copies of the final report along with six copies of management executive summary reports and all enclosures (G & G maps, Petrophysical correlations maps and Reservoir Engineering production profiles) both hard and soft form, with necessary amendment/changes as an outcome of discussion in presentation.

13.2.7 Final report will be submitted within two weeks after the receipt of the comments from OGDCL on draft report and incorporating/amending the same in the final version.

13.2.8 The report will include in detail, all aspects of the study with the conclusions and recommendations derived from the study.

13.3 Presentations

During the course of study, there will be two oral presentations at Head office OGDCL Islamabad. Consultant will present all the work done in below mentioned milestone events to OGDCL professional and JV partners (if any) in two days, first day presentation will be to OGDCL and second day the presentation will be to JV Partners (if any) and OGDCL professionals.

13.3.1 First oral presentation will be made at the end of Phase-I (Static Model).

13.3.2 Second (Final) oral presentation will be made at the end of Phase-III.

13.3.3 The final version of the simulation model and initialization data will be preserved for a period of five years so that if OGDCL desire another prediction run or incorporation of other data, and/or update of study, it could be obtained without much difficulty.

13.3.4 The Consultant has to supply OGDCL with a copy of computer outputs of each phase right after their completion readable on OGDCL computer as well as hard copy.

13.3.5 The consultant will provide all the final work done on electronic data storage device so that study could be updated on OGDCL's computers when required.

13.3.6 The pressure and fluid saturation maps to be prepared for each five year in prediction cases and will be included in the final report.

13.3.7 Well and field wise summaries (e.g. pressure, prod, and no. of wells) in all prediction cases will be provided once in every 3 months in tabular form in the final report.

14. TECHNICAL EVALUATION CRITERIA

a. The **Technical** evaluation will be based on the following criteria.

POINTS

i)	Experience of the firm/consultant	10
ii)	Number of similar projects completed during last ten (10) years	10
iii)	Technical approach	35
iv)	Work plan including manning schedule	10
v)	Skill/Technical transfer plan	05
vi)	Personnel (Qualification & Expérience)	<u>30</u>
	Total:	100

b. Criteria for selection of the consultant will be based on Clause-3B of PPRA Rules (Quality & Cost Based Selection).

c. 80% weight age will be given for technical evaluation and 20% for financial evaluation. The lowest bidder will attain maximum marks in financial evaluation and others would be ranked on the sliding scale.

d. The points obtained in technical evaluation and financial evaluation will then be combined and bidder attaining maximum points in technical and financial evaluation as a whole will be awarded the contract.

- e. The **financial** proposal of bidders obtaining less than 80% points in total and less than 70% points in each category in the technical evaluation will not be opened and treated as NON RESPONSIVE.
- f. Complete detail and breakup of marking as per Evaluation Criteria given at Clause-12.1 above is attached at "Annexure-I".
- g. Apart from detailed CVs of dedicated professionals for this project, the consultant will also provide the following information required for technical evaluation:
 - i. The consultant shall provide at its own expense suitably qualified personnel to ensure efficient performance of the studies to achieve the objectives. The consultant will designate in writing one of its staff as Project Coordinator.
 - ii. The Project Coordinator shall act on behalf of the consultant and shall be responsible for supervising all of the consultant's Work responsibilities, and also for maintaining liaison between the Company and the consultant.
 - iii. Consulting firm should submit the name, academic qualification and experience of the technical personnel to conduct the study. Alternative or substitute names should also be mentioned. The consultant should clearly mention team experience in similar studies and terrains (Pakistan, India, and Iran etc.).
 - iv. A team comprised of geoscientist and reservoir engineers will work at all levels of study to ensure that the study meets all the requirements of OGDCL and for timely completion of work.
 - v. Team of professionals as per table below:

Sr. No.	Discipline	Team Leader	Team Members	
1.	Geophysics			
2.	Petrophysics			
3.	Geology			
4.	Geo Modeling			
5.	Reservoir Engineering			
6.	Simulation Engineering			

- vi. Each team excluding team leader must not exceed more than two professionals and the consultant will ensure, once assigned the team/personnel shall remain dedicated to the project till its completion and will not be engaged in any other project at the cost of OGDCL project.
- vii. The CVs of only the dedicated team be submitted along with their present contact number and email address.
- viii. In case of defection of any dedicated team member, the consultant will be responsible to engage a professional of similar domain/caliber.

h. **Detail of Software**

- i. Following G&G and RE software are available with OGDCL. The consultants/firms will be required to conduct all the work/interpretation and provide the final output that is loadable on these software listed below:
 - a) Geoframe / Petrel (G&G, Seismic interpretation, RE)
 - b) Petrel (G&G, RE)
 - c) Geoframe (seismic interpretation)
 - d) Eclipse (Office, Black Oil, Compositional, Local Grid Refinement PVTi)
 - e) Ecrin (Sapphire, Topaz)
 - f) MatBal (PPL would be requiring on Mbal)
 - g) OFM
 - h) Merak Volt
 - i) Techlog
- ii. The consultant must use the Petrel software for Reservoir Simulation.
- iii. Software used for Geological, Petrophysical and Economic Analysis should be used as mentioned above.

15. GENERAL TERMS / CONDITIONS

- a. It is highly preferred to have all phases of the study being conducted at one location. This is for information of those consulting firms who have various offices at different locations in which some parts of the study may be carried out in any one of them. OGDCL feels that the interfacing between various stages of the study is very important.
- b. The study will be carried out by the same office invited to bid for the study.
- c. The study will be conducted by the consultant with active participation and involvement of technical staff of OGDCL & JV Partners.
- d. All phases will have to be accomplished in association with OGDCL & JV Partners Reservoir Engineer/Simulation Professionals, Reservoir Geologists / Geophysicists & Petrophysicist assigned with the consultants. The responsibility of the accomplishment of all kind of work/studies will be on the consultant's part. However, the OGDCL & JV Partners professionals in different disciplines will be attached from time to time for necessary inputs/training.
- e. The personnel who will conduct the study should be dedicated fully to this study and will be available throughout their relevant phase of this study.
- f. Consultant would mention their bid cost estimates of each phase separately but OGDCL will evaluate the bid on total cost basis along with other criteria i.e., personnel's experience, company's experience, experience on similar projects etc.

- g. OGDCL may arrange a pre-bid meeting on request to explain the present status of field and objective of study. The consultants will participate in the meeting at their own cost.
- h. Consultant will submit their invoices on each phase basis. The total cost of the study mentioned in the Financial Proposal by the consultant will be taxable as per Government of Pakistan Rule or any other amount announced time to time by GOP in this regard.
- i. All geological, geophysical, drilling, testing, production, well logs, core and fluid analysis data required for the study will be available to the consultant free of charge. Such material will be the property of OGDCL. The Consultant will treat all data and information supplied by OGDCL and those acquired by him during the implementation of the study with utmost confidentiality.
- j. OGDCL reserves the right to discontinue any study/any task/any service related to above scope of work at any stage. OGDCL reserves the right to reject the services of any consultant provided by the consultancy firm at any time/any stage and hence it will be the responsibility of the consulting firm to provide the replacement without any delay accordingly.

16. **TIMING**

The project will commence with the signing of the contract. **The total time of the study would be 40 weeks from the date of signing of the contract.** (i.e. 02 weeks for data collection, 36 weeks for main study, 02 weeks for presentation).

Note: LDs will be applicable as per SECTION 12. LIQUIDATED DAMAGES of the Draft Contract (Annexure G) if complete study is not performed within 44 weeks from the date of signing of the contract. Study completion date will be determined when hard/soft final report is delivered by Contractor to OGDCL.

A detailed work plan should be submitted with the Technical Proposal.

17. **SUBMISSION OF PROPOSALS**

- 17.1 The technical proposal must contain a brief history of consulting firm, the nature of services provided, the key projects undertaken and its experience in the field of integrated reservoir simulation studies. A soft copy on CD/DVD of the technical proposal should also be submitted along the hard copy.
- 17.2 The **technical** part of the proposal should also contain a tentative work program and time schedule to complete each phase of study. They should indicate the other projects completed by the consulting firm and their manpower allocation and their Resume. The Resume should be submitted in the following format:
 - a) Academic Qualification.
 - b) Total overall relevant experience. Particularly emphasizing experience in fold and thrust belts having Carbonate/clastic Reservoirs and Multi Staked Reservoirs as well.
 - c) Overall experience/description of job assignments of the personnel with the bidding company.
 - d) Total overall experience of the person.

- a. The **financial** section of the proposal should contain:
- Rate per month for each category of staff.
 - Rates per day or per hour for the services to be performed during the execution of the study. (Details must be provided)
 - Plan for Participation of OGDCL & JV Partners professionals (06 persons) in the study.
 - Phase-wise break down of the cost.
 - Total cost of the study.
 - The information mentioned at a & b above may be provided in the following format:

S. No	Information	US\$
1	Rate per month for each category of staff	Cost/month
2	Services to be performed during the execution of the study	Cost/day or Cost/hour
3	Total Cost	

- g) The information mentioned at d & e above may be provided in the following format:

S. No	Study Phase	Total Cost (US\$)
1	Phase I	
2	Phase II	
3	Phase III	
4	Final Report/Presentation	
5	Total Lump sum Cost inclusive of all applicable taxes duties and Levies.	

- Total lump sum cost (Point-g above) inclusive of all applicable taxes duties and levies except provincial sales tax / ICT tax on services shall be considered for evaluation.
- Any bidder not following the financial format given in the table above, will be declared financially non-responsive.
- Price shall be inclusive of all taxes, duties, levies, and charges except Provincial Sales Tax (PST)/Islamabad Capital Territory (ICT) Tax on services. Provincial Sales Tax (PST)/Islamabad Capital Territory (ICT) Tax on services where applicable will be paid by OGDCL.
- The prices should be quoted in USD. However, payment to all Pakistan based companies will be made through cross cheque in 100% Pak Rupees, at actual, against verified invoices at official exchange rate prevalent on the date of payment.
- For Foreign based Companies, the payment will be made in US\$, at actual against verified invoices through Irrevocable Letter of Credit (LC).

DETAIL OF MARKING OF EVALUATION CRITERIA

- **14.1-a) Experience of Firm/Consultant: 10 Marks**

- **Number of 3D static models developed in the past 10 years**
 - 10 or more 02
 - 5 to 9 1.5
 - 1 to 4 01
 - No static model developed in the past 10 years 0

- **Number of depositional models developed in the past 10 years**
 - 10 or more 2
 - 5 to 9 1.5
 - 1 to 4 01
 - No depositional model developed in the past 10 years 0

- **Number of dynamic compositional gas condensate /black oil models developed in the past 10 years**
 - 10 or more 02
 - 5 to 9 1.5
 - 1 to 4 01
 - No dynamic compositional model developed in the past 10 years 0

- **Number of reserves certification done in the past 10 years**
 - 10 or more 02
 - 5 to 9 1.5
 - 1 to 4 01
 - No reserves certification done in the past 10 years 0

- **EOS models of oil/gas condensate reservoirs developed in the past 10 years**
 - 10 or more 02
 - 5 to 9 1.5
 - 1 to 4 01
 - No model developed in the past 10 years 0

Note:

- All of the above criteria are mandatory

- Documentary evidence should be submitted for each of the requirement

- **14.1-b)** Number of Integrated Reservoir Simulation studies carried out by consultant/firm in last ten years will be considered and for Pakistan will be preferred, however, Maximum marks will be given to the consultant/firm having done maximum Integrated Reservoir Simulation studies carried out for OGDCL with satisfactory completion report, (no other study i.e. Geological / Engineering / Drilling / Job Designing study will be considered in this marking) 10 Marks

- **14.1-c)** Maximum marks will be given to the firm having best Technical approach using software as per TOR. The technical part of the proposal will be evaluated point to point in the light of TOR and each part will be marked by the relevant professional (e.g. G&G part by Geoscientists, RE part by Reservoir Engineers and Petrophysical part by

Petrophysicist of OGDCL. The technical approach which fulfils the maximum requirement of the TOR will be given maximum marks.

- **14.1-d)** Consultant/Firm having same time as given in work plan of TOR will be preferred but maximum marks will be given to the consultant/firm quoting less but effective time than prescribed time given in TOR.
- **14.1-e)** Maximum marks will be given to the firms giving the best way of skill / technical transfer plan.
- **14.1-f) CVs of ONLY DEDICATED TEAM LEADER and TWO TEAM MEMBERS as given in below mentioned Table will be evaluated for this project. Other/extra CVs will not be entertained.**
- For evaluation purpose maximum marks will be given to those personnel having highest relevant educational credentials and maximum experience of conducting Integrated Reservoir Simulation studies with expertise of OGDCL in use Software mentioned in TOR and working experience in Pakistan and with OGDCL.
- Following information about the professionals dedicated by the consultant/firm will be required, supported by documentary evidence:

Geophysicist

International and in Pakistan experience of team leader and team members to interpret 2D/3D seismic data in different regimes along with no. of projects, project name, Tectonic regime, Km² for each project in last ten years.

- Qualification
- Relevant experience
 - 1 5 or More Projects
 - 2 3-4 Projects
 - 3 1-2 Projects
 - 4 0 Project
- Working in Pakistan/OGDCL
- Experience of Software use

Development Geologist/Geo Modular

International and in Pakistan experience of team leader and team members to build comprehensive Geological model based on the available 2D/3D seismic data, lithological & petrophysical characteristics, stratigraphic controls and depositional environment, no. of projects, project name in last ten years

- Qualification
- Relevant experience
 - 5 or More Studies/Projects
 - 3-4 Studies/Projects
 - 1-2 Studies/Projects
 - 0 Studies/Project
- Working in Pakistan/OGDCL
- Experience of Software use

Petrophysicist

International and in Pakistan experience of team leader and team members to analyze in detail the available log and core analysis data to determine petrophysical properties, no. of projects, project name in last ten years

- Qualification
- Relevant experience
 - 5 or More Studies/Projects
 - 3-4 Studies/Projects
 - 1-2 Studies/Projects
 - 0 Studies/Project
- Working in Pakistan/OGDCL
- Experience of Software use

Reservoir Engineer

International and in Pakistan experience of basic reservoir engineering, PVT analysis, fluid properties, material balance technique to estimate the OOIP and GIIP, determine the drive mechanism and its strength and number of assignments done in last ten years

- Qualification
- Relevant experience
 - 5 or More Studies/Projects
 - 3-4 Studies/Projects
 - 1-2 Studies/Projects
 - 0 Studies/Project
- Working in Pakistan/OGDCL
- Experience of Software use

Simulation Engineer

International and in Pakistan experience of developing reservoir tank models using “MatBal”, experience in developing a representative 3D Black Oil Reservoir Dynamic Model in last ten years More than 5 studies

- 4-5 studies
- 3-4 studies
- 2-3 studies
- Less than 2 studies

Reserves Evaluation Engineer

International and in Pakistan experience of optimum reserves evaluation be involved in reserves evaluation studies and reserves certification studies and number of assignments done in last ten years

- More than 5 assignments
- 4-5 assignments
- 3-4 assignments
- 2-3 assignments
- Less than 2 assignments

Production Engineer

International and in Pakistan experience of optimum production operation conditions for maximum oil/gas recoveries, be involved in Reservoir Simulation studies and number of assignments done in last ten years

- More than 5 studies
- 4-5 studies
- 3-4 studies
- 2-3 studies
- Less than 2 studies

Geophysicist	Qualification	Relevant Experience (Years)	Software Expertise	Experience with OGDCL
Team Leader Name				
Member-1 Name				
Member-2 Name				

Geologist/Geo Modular	Qualification	Relevant Experience	Software Expertise	Experience with OGDCL
Team Leader Name				
Member-1 Name				
Member-2 Name				

EOR Professionals	Qualification	Relevant Experience (Years)	Software Expertise	Experience with OGDCL
Team Leader Name				
Member-1 Name				
Member-2 Name				

Petrophysicist	Qualification	Relevant Experience (Years)	Software Expertise	Experience with OGDCL
Team Leader Name				
Member-1 Name				
Member-2 Name				

Reservoir Engineer	Qualification	Relevant Experience (Years)	Software Expertise	Experience with OGDCL
Team Leader Name				
Member-1 Name				
Member-2 Name				

Simulation Engineer	Qualification	Relevant Experience (Years)	Software Expertise	Experience with OGDCL
Team Leader Name				
Member-1 Name				
Member-2 Name				

Reserve Evaluation Engineer	Qualification	Relevant Experience (Years)	Software Expertise	Experience with OGDCL
Team Leader Name				
Member-1 Name				
Member-2 Name				

Production Engineer	Qualification	Relevant Experience (Years)	Software Expertise	Experience with OGDCL
Team Leader Name				
Member-1 Name				
Member-2 Name				

Annexure “B”

BID BOND

Oil & Gas Development Company Limited, Guarantee No.....
OGDCL House, Jinnah Avenue, Date of issue.....
Blue Area, Islamabad. Date of expiry

Amount.....

Dear Sir,

In consideration of M/s.....
herein after called “THE BIDDER” having submitted the accompanying Bid with reference to OGDCL tender enquiry No. **PROC-SERVICES/LCB/RMD-3306/2018** and in consideration of value received from (the Bidder above), we hereby agree to undertake as follows:-

1. To make unconditional, immediate and forthwith payment of the sum of **PKR: 1,150,000/- (Pak Rupees One million One Hundred Fifty Thousand Only)**. upon your FIRST and SIMPLE written demand without further recourse, question, query, deferment, contestation or reference to the bidder, account party or any other person in the event of the withdrawal of the aforesaid bid by the BIDDER before the end of the period specified in the Bid after the opening of the same for the validity thereof or if no such period be specified, within 150 days after the said opening or if the Bidder, having been notified of the acceptance of his bid by the Company during the period of bid validity:
 - a. Withdraw their bid during bid validity.
OR
 - b. Fails to provide performance bond/or advance bank guarantees.
OR
 - c. Submit forged document in support of their bid.
OR
 - d. Fails to execute contract as per terms of contract.
OR
 - e. Fails to supply the short/wrong shipped items
2. To accept written demand from you as conclusive, sufficient and final evidence of the existence of a default of non-compliance, breach or default as aforesaid on the part of the BIDDER and to make payment immediately and forthwith upon receipt of your FIRST and SIMPLE written demand.
3. No grant of time or other indulgence to, or composition or arrangement with the BIDDER in respect of the aforesaid Bid with or without notice to us shall affect this Guarantee and our liabilities and commitments hereunder.
4. This is an independent and direct obligations guarantee and shall be binding on us and our successor in-interest and shall be irrevocable.
5. The Guarantor Bank warrants and represents that it is fully authorized, empowered and competent to issue this guarantee.

Yours faithfully,

(BANKERS)

Annexure -“C”

PERFORMANCE BOND/BANK GUARANTEE

Oil & Gas Development Company Limited,
OGDCL House, Jinnah Avenue,
Blue Area, Islamabad.

Guarantee No.....
Date of issue
Date of expiry
Amount.....

Dear Sir,

Ref: Our Bank Guarantee No. _____ in the sum of
_____ Account _____ Amount of
Contract/Job _____
In consideration of you having entered into contract No.
_____ Dated _____
with _____ called Contractor and in consideration of value received
from CONTRACTOR, we hereby agree and undertake as follows:

1. To make unconditional, immediate and forthwith payment to you as called upon of an amount (equivalent to 10% of total contract value in Pak Rupees) on your written FIRST and SIMPLE demand without further recourse, question, query, deferment, contestation or reference to CONTRACTOR or any other person, in the event of default, non-performance or non-fulfillment by CONTRACTOR of his obligations liabilities, responsibilities under the said Contract of which you shall be the sole and absolute judge.
2. To accept written demand from you as conclusive, sufficient and final evidence of the existence of a default or breach as aforesaid on the part of CONTRACTOR and to make payment immediately and forthwith upon receipt of your FIRST and SIMPLE written demand.
3. To keep this Guarantee in full force and effect from the date hereof until..... from the date of contract execution / mobilization Notice.
4. That no grant of time or other indulgence to, amendment in the terms of the contract by Agreement between the parties, or imposition of Agreement with contractor in respect of the performance of his obligation under and in pursuance of the said Agreement with or without notice to us, shall in any manner discharge of otherwise however affect this Guarantee and our liabilities and commitments there under.
5. This is an independent and direct obligations guarantee and shall be binding on us and our successor in-interest and shall be irrevocable.
6. This Guarantee shall not be affected by any change in the constitution of the Guarantor Bank or the constitution of the Contractor.
7. The Guarantor Bank warrants and represents that it is fully authorized, empowered and competent to issue this guarantee.

Authorized Sign for Issuing Bank

Seal of the Bank

Annexure -“D”

BIDDING FORM

Date.....

Tender Enquiry No.

To

Oil & Gas Development Company Limited,
OGDCL House, Plot # 3013,
Blue Area, Islamabad

Gentlemen,

Having examined the scope of work and Instructions to bidders of Invitation to Bids, the receipt of which is hereby acknowledged, we the undersigned, offer to supply the services (Nature of Service) to OGDCL in conformity with the scope of work and Instructions to bidders at the rates mentioned in our Bid Proposal or other such sums as may be ascertained in accordance with the said conditions.

2. We confirm that the terms and conditions given in the Tender Enquiry / Tender Documents are acceptable to us and if our Bid is accepted we shall execute a contract with OGDCL accordingly without any exceptions. We further confirm to commence service withindays of the mobilization notice issued by OGDCL

3 We agree to validate bid unconditionally for the period of 120 days from the date of opening the same and it shall remain binding upon us and may be accepted thereof, shall constitute a binding contract between us.

4. We hereby certify that our Firm / Company / Local Agent is or has not been at any time during the past five years, involved in litigation, arbitration or any other unsettled dispute with OGDCL / JV Partners.

5. We further certify that all the contracts / orders placed on us by OGDCL / JV Partners have been executed timely and as per terms & conditions of the Contract / order without any unsettled dispute.

6. Until a formal Agreement is prepared and executed, this bid, together with your acceptance thereof, shall constitute a binding contract between us.

7. We understand that you are not bound to accept the lowest or any tender you may receive.

8. Our bid proposal do not contain any deviation or exceptions from the terms & conditions enunciated in the tender documents.

Dated this.....days of.....2017,

Name & Signature.....in the Capacity of.....

duly authorized to sign tenders for and on behalf of.....
(Name of the firm in block capital Letters)

Address.....

Telex No..... Fax No.....Phone No.....

Witness

1.
(Name)

(Signature)

2.
(Name)

(Signature)

Annexure-“E”

(On official letter-head of the bidder)
To be signed by the
Chief Executive of the
Bidding company or a representative duly
Authorized by board
Resolution.

INTEGRITY AND ETHICS UNDERTAKING

We hereby commit and undertake to observe the following principles during our participation in the tender process and during the contract execution:

- i. That we will not directly or through any other person of firm, officer promise or give to any of the employees of OGDCL involved in the tender process or execution of the contract any gain, pecuniary benefit of facilitation payment in order to obtain in exchange any advantages of any kind whatsoever during the tender process or during the execution of contracts.
- ii. That we have not and will not enter with other bidders into any undisclosed agreement or undertaking either formal or informal to restrict competitiveness or to cartelize in the bidding process.
- iii. That we will ensure that the remuneration of agents (if engaged) is appropriate and for legitimate services only.
- iv. That we will not use subcontracts, purchase orders or consulting agreements as means of channeling payments to employees of OGDCL.
- v. That we will not commit any offence under the Pakistan Penal Code, Prevention of Corruption Act or National Accountability Ordinance to achieve any advantage, gain or benefit during the tender process or the execution of the contract.

We further understand and acknowledge that any violation or transgression of the above mentioned principles will attract disqualification from the tender process and may also result in permanent exclusion from future contract award process.

We also accept and undertake to respect and uphold OGDCL's absolute right to resort to and impose such disqualification, debarment or execution.

For and on behalf of _____

Tender No _____

Annexure-“F”

Mandatory for participation in Bidding Process

AFFIDAVIT

I,.....S/o....., aged.....years, working as Proprietor/Managing Partner/ Director of M/s.....having its registered office at..... do hereby solemnly affirm and declare on oath as under :

1. That I am competent to swear this affidavit being proprietor/one of the partners/ Director of M/s.....
2. That M/s.....is a proprietorship/partnership firm/company is participating in tender process conducted by OGDCL.
3. That I hereby confirm and declare that none of my/ our group/ sister concern/ associate company is participating/ submitting this tender.
4. That I hereby confirm and declare that my/our firm/company M/s..... and my/ our firm/ group/ company/ sister concern / associate company have not been black listed/ de-listed any Institutional agencies/ Govt. Dept./ Public Sector Undertaking.
5. That there is no change in the Name & Style, Constitution and Status of the firm, after Pre-qualification.
6. That I further undertake that in case any of the facts contained above and in our application is found other-wise or incorrect or false at any stage. my/our firm/ company/ group/sister concerns/ associate companies shall stand debarred from the present and future tenders of the OGDCL.

(Signature of the Proprietor/ Managing Partner/Director with Seal)

DEPONENT

Verified at on..... that the contents of paras 1 to 6 of this affidavit are true and correct to best of my knowledge and no part of this is false and nothing material has been concealed or falsely stated therein.

(Signature of the Proprietor/ Managing Partner/ Director with Seal)

DEPONENT

(Signature & Seal of Notary) 



Annexure-“G”

DRAFT CONTRACT
CONTRACT NO. PROC-FD/CASE NO. /
NAME OF SERVICES

THIS **Contract for hiring of (Name of Services) (“Contract”)** is made at Islamabad as of this----- day of -----/year of execution, by and between

Oil & Gas Development Company Limited , a body corporate, having its office at OGDCL House, Jinnah Avenue, Sector F-6, Islamabad (hereinafter referred to as the “Company” which expression shall include its successors and assigns) and

M/s (Name of Contractor or Consultant as the case may be) having its office at address..... (hereinafter referred to as the “Contractor / Consultant” which expression shall include its successors and assigns)

Contractor/ Consultant and Company may hereinafter be collectively referred to as the “Parties” and each individually as a “Party”.

WHEREAS, The Company is desirous of hiring timely, efficient and reliable (Name of Services)services under rate running contract for a period of (period)on as and when required basis.

AND WHEREAS, the Company invited bids for providing Name of Services through Tender Enquiry No. PROC-FD/Case No..... and the Contractor / Consultant through its Bid Proposal No..... dated warrants and represents for providing efficient and reliable Name of Services

WHEREAS, the Contractor / Consultant is engaged in the business of rendering the desired services to various E & P companies and it hereby expresses its ability and willingness to provide the desired services along with necessary equipment, type of Contract.

NOW THEREFORE, in consideration of the promises and mutual undertaking and covenants hereinafter set forth, the Parties hereby agree as follows:

SECTION 1. SCOPE OF WORK

Description of Scope of Work (As described in TOR/Tender enquiry)

SECTION 2. TERM:

The initial term of this Contract shall be -----months/years from the date of its acceptance by the contractor till completion of the job whichever is later unless earlier terminated under the provisions hereof. Any extension in the term of Contract will be subject to mutual consent of both the parties.

SECTION 3. CONTRACT DOCUMENTS:

The following documents shall be deemed to form and be read and construed as integral part of this Contract:

- (a) This Contract.
- (b) Company’s Invitation to Bid No. PROC-FD/ / /2017 dated _____.
- (c) Company’s LOI No. PROC-FD/ / /2017 dated _____.
- (d) Contractor’s letter dated _____.
- (e) Contractor’s Bid Proposals No. dated _____.

Any inconsistency between the above documents of this Contract shall be resolved by giving precedence in the order in which they are listed above.

SECTION 4. PRICING TERMS:

- 4.1 The Services under this Contract shall be rendered at an estimated Cost of _____ as detailed below:
- 4.2 All prices charged under this Contract shall remain firm during the period of this Contract.
- 4.3 All payments shall be made in Pak Rupees through cheque / inland LC against verified invoices after execution of job/work as the case may be, under this Contract. The Company shall use its best efforts to make payment as early as possible against duly verified invoices. However, any payment made after thirty (30) days shall not in any way attract any markup, interest, surcharge or charges, etc.
- 4.4 To avoid delay in payment, it is essential that the invoices shall:
- (a) Be duly signed and stamped and type-written in English.
 - (b) Be identified by the Contract number.
 - (c) Contain sufficient description of services provided by the Contractor.
 - (d) State the location of the Company where Services have been provided.
 - (e) State the period of Services, duly verified with sign and stamp of Head of Department.
 - (f) Be precise and strictly in accordance with the Contract.
 - (g) Contain any other information deemed essential either by the Contractor or by the Company.
 - (h) Be submitted to the Company at the address given under section 26 of the contract.

SECTION 5. TAXES AND DUTIES:

- 5.1 The contract price includes all direct taxes, duties, fees, levies and any other relevant charges payable/ applicable on the last date of submission of main/supplementary financial bid inside and outside Pakistan, except if OGDCL imports material in its own name it will bear duties/ import taxes/ port charges. The Contractor will be responsible for all the direct taxes (present or future) with respect to income/ payments of total contract amount, under the scope of the contract.
- 5.2 Indirect taxes (Provincial Sales Tax/ Islamabad Capital Territory Sales Tax) in Pakistan will be borne by OGDCL at actual where applicable. The contract price will be adjusted for any subsequent changes in the rates of indirect taxes as made applicable thereafter by the relevant authorities in Pakistan.
- 5.3 Any direct taxes, duties, fees, levies and other relevant charges, present or future, assessed or payable inside or outside Pakistan by the Contractor and its sub-contractor and /or by the expatriate personnel deputed by the Contractor and its sub-contractor in connection with its performance under the Contract shall be the sole and exclusive responsibility of the Contractor.
- 5.4 The Contractor shall be responsible and pay all taxes on its income outside and in particular on its income in Pakistan under the Contract and under the laws of Pakistan.
- 5.5 The Company shall have the right, as provided under the laws of Pakistan to meet its obligations and in particular to deduct from the payment due to the Contractor (against entire contract value including supplies and / or services components etc as applicable) , income tax at source at the rates prevailing from time to time, from the invoiced amounts, or such reduced rates fixed by the

taxation authorities in Pakistan for the Contractor on production of current and valid documentary evidence by the Contractor from competent tax authorities in Pakistan and pay such amount to appropriate authorities.

- 5.6 The Contractor shall also be responsible for any income taxes levied on the Contractor's and its sub-contractor's expatriate personnel, under the laws of Pakistan and for all social security issuances and other contributions for the Contractor's expatriate personnel regardless of whether such contributions are levied on employer or employee or both in Pakistan or outside Pakistan.
- 5.7 The Contractor shall keep the Company duly informed about the steps taken by the Contractor in order to meet its obligations under the Contract and provide the necessary documents to the Company in this connection.
- 5.8 The Contractor shall indemnify the Company against any claim which might occur due to non compliance by Contractor of any legal obligation regarding the taxes, duties, fees, levies, or other charges, including taxes on income in Pakistan and any other payments to the relevant Government or Governmental agencies or any other applicable authority.
- 5.9 Understanding reflected under the above tax clause would prevail in case of any understanding to the contrary that may be reflected with respect to tax matters, in any other clause of the contract

SECTION 6. ADJUSTMENT OF CONTRACT PRICE:

The Contract value (price) shall be subject to adjustment as a result of addition / reduction in scope of work. However unit price quoted for such work shall be used as base price for computation of final invoice. Contractor should take approval for such changes in writing from the Company. Rates and quantum of any work, not covered in the scope of work shall be subject to approval of Company.

SECTION 7. CONTRACTOR'S OBLIGATIONS:

- 7.1 The Contractor warrants and represents that all Services along with necessary equipment provided under this Contract shall be in accordance with good industry practice and the Contractor shall use every reasonable means for efficient and timely performance and provision of the Services.
- 7.2 The equipments, tools and materials utilized by the Contractor in performance of this Contract shall be handled and utilized with due care and diligence and proper record of consumables etc shall be maintained and made available to the Company upon request.
- 7.3 The Contractor shall secure and maintain during the performance of this Contract, all licenses, permits, authorization and certification required under the laws of Pakistan and applicable to Contractor. Company has the right to inspect such licenses, permits, authorization and certificates and the Contractor shall forthwith comply with such request.
- 7.4 Contractor shall employ and depute for the execution of Services, persons who are careful, skilled and experienced in their profession. The Company' shall have the right to ask the Contractor to replace any person employed by the Contractor for execution of Services who, in the sole opinion of Company, misbehaves, is incompetent or negligent in the performance of his duties or fails to conform with any particular provisions with regard to safety which may be set out in the Contract, or any conduct which is prejudicial to safety or health, and such person shall not be employed again for the Services without the permission of the Company.

- 7.5 Contractor and its personnel shall, when using Company's premises, adopt and observe all safety, security, fire and health measures and comply with all reasonable directions relating to health and safety rules and emergency evacuation plans as notified or as directed by the Company.

SECTION 8. DECLARATION:

- 8.1 The Contractor hereby declares that it has not obtained or induced the procurement of any Contract, right, interest, privilege or other obligation or benefit from Company through any corrupt business practices.
- 8.2 Without limiting the generality of the foregoing, the Contractor represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, Contractor, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from the Company, except that which has been expressly declared pursuant hereto.
- 8.3 The Contractor certifies that it has made and shall make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with the Company and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.
- 8.4 The Contractor accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any Contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to the Company under any law, Contract or other instrument, be voidable at the option of the Company.
- 8.5 Notwithstanding any rights and remedies exercised by Company in this regard, the Contractor agrees to indemnify Company for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to Company in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback paid by the Contractor as aforesaid for the purpose of obtaining or inducing the procurement of any Contract, right, interest, privilege or other obligation or benefit in whatsoever form from Company.

SECTION 9. PERFORMANCE BOND/SECURITY DEPOSIT:

The Contractor shall provide to the Company, within fifteen (15) days of the award of the Contract, a Performance Bond in the form of an irrevocable, independent, unconditional, direct obligation of the bank and first and simple demand guarantee of a Pakistani Scheduled Bank or branch of a foreign bank operating in Pakistan in the amount equivalent to 10% (Ten percent) of the total contract value in Pak Rupees/US\$ strictly in accordance with the format given at LOI to cover and secure the Contractor's faithful performance and execution of this Contract. The charges and expenses payable in connection with the issuance, extension, renewal and maintenance of the Performance Bond shall be borne and paid by the Contractor. The Performance Bond shall be valid and shall be maintained in full force effect until -----/ extendable six (06) months beyond the validity of the Contract. The Company has sole and absolute right to encash the Performance Bond without any prior notice to the Contractor in the event of any breach, failure, non-compliance or delay in the performance of the Contract.

SECTION 10. LIABILITIES:

- 10.1 Each party shall defend, indemnify and hold the other party harmless from and against any claim INCLUDING THIRD PARTIES arising out of
- (i) loss or damage to its own property, and / or
 - (ii) death of or injury to its own personnel.
- 10.2 Each party shall be liable for, and shall defend, indemnify and hold the other Party and its members /affiliates, co-venturers (if any) , contractors or subcontractors, and it's and their respective employees, directors, officers, agents and invitees harmless from and against. all claims, demands, causes of action, judgments, awards, damages, losses, costs, expenses, expenses and liabilities of any kind and character arising out of third party property damage (including death) caused by the indemnifying Party's negligence during the performance of the Contract.
- 10.3 Notwithstanding any other provision of this Contract, Company shall defend, indemnify and hold harmless the Contractor from and against all liabilities, claims, damages, losses and costs relating to or resulting from (a) through (e) below, including any and all personal injury, death and loss of or damage to the drilling rig, vessel or platform and all other property arising there from (except if caused by Contractor' Gross Negligence or willful misconduct):
- (a) damage to or loss of or impairment to any well (including the casing) or well bore;
 - (b) killing of or the bringing under control of any well;
 - (c) damage to or loss of any reservoir or productive formation, or subsurface minerals or structure or the loss of oil or gas therefrom;
 - (d) blowout, fire, explosion, cratering , or any uncontrolled well condition;
 - (e) pollution, as well as containing, controlling and cleaning up any pollution, contamination or debris.

Gross Negligence or Willful Misconduct means any act or failure to act (whether sole, joint or concurrent) by a person that was intended to cause or was in reckless disregard of, or wanton indifference to, the harmful consequences to the safety or property of another person which the person acting or failing to act knew, or should have known, would result from such act of omission, provided that Gross Negligence or Willful Misconduct does not include any act or failure to act insofar as it: (i) constituted mere ordinary omission or oversight; or (ii) was done or omitted in accordance with the express instructions or approval of all parties."

- 10.4 This clause will be applicable to both the parties i.e. OGDCL and the Contractor, therefore its ambit and scope will be interpreted accordingly.

SECTION 11. INDEMNITIES:

- 11.1 Neither Party shall be liable to the other for any punitive, indirect or consequential damages sustained by the other including without limitation business interruptions, loss of profits, loss of use of assets, loss of data and loss of contracts, and each Party shall hold the other Party harmless in respect thereof.
- 11.2 The Contractor shall indemnify the Company against all motions, proceedings, claims, liens and demands whatsoever which may be made against the Company by the third parties for or in respect of or out of any failure by the Contractor in performance of its obligation or wrongful performance under this Contract or any act or omission in connection therewith. Should Company have to pay any moneys in respect of any such claims or demands, the amounts to be

paid and the costs incurred by the Company connection therewith, shall be charged in to and paid by the Contractor in full.

SECTION 12. LIQUIDATED DAMAGES:

- 12.1 If the contractor fails to deliver any or all of the goods/services within the time periods(s) specified in the Contract, the purchaser shall, without prejudice to other remedies under the Contract, deduct from the Contract Price/Bank Guarantee as liquidated damages, a sum not more than 0.5% of the contract price per week or part thereof for first four weeks, 1.00% per week for next four weeks and 1.5% per week exceeding four weeks upto maximum extent of 10% of the contract value.
- 12.2 In case the purchaser is satisfied that the delayed/defective services/shipment was due to some mistake or circumstances beyond the control of the contractor and the contractor has not intentionally or negligently contributed in the delay, the purchaser may impose Liquidated Damages for not more than a sum equivalent to 0.5% of the delayed or defective shipment per week or part thereof for first two weeks, 1.00 per week for next three weeks and 1.5% per week exceeding five weeks but not exceeding 10% of the contract value of the delayed/defective shipment provided that the Contractor takes immediate remedial measures for the replacement of defective shipment and takes prompt steps to mitigate the delayed. The Purchaser may however, impose Liquidated Damages as per clause 12.1 above if the delayed or defective shipment/ services has affected the project completion schedule or has resulted in Production losses.
- 12.3 Even after imposition of LDs, if the supplier fails to materialize the delivery (material and or services); the Purchaser reserves the right to cancel Purchase Order/Contract/LC and forfeit the Guarantee (if applicable) after intimating the supplier for such cancellation/forfeiture.

SECTION 13. PATENT RIGHTS:

The Contractor shall protect, indemnify and hold the Company harmless from and against all claims, proceedings, demands, damages, costs, charges and expenses whatsoever for or on account of infringement of any patent rights, design, trade-mark, industrial design or name or other protected rights in respect of any design, method, machine work, material etc. used for or in connection with the Services.

SECTION 14. DIRECTIONS:

The Contractor and its personnel must, when using Company's premises, adopt and observe all safety, security, fire and health measures and comply with all reasonable directions relating to health and safety rules and emergency evacuation plans as notified or as directed by the Company or its representative.

SECTION 15. CONFIDENTIALITY:

- 15.1 Any data provided by the Company or which the Contractor or its employees have access to, or which they acquire directly or indirectly under this Contract or during the performance of this Contract, shall be deemed Confidential Information. Duplication or disclosure of such Confidential Information by Contractor or any one claiming through it without the prior written consent of the Company is strictly prohibited. All Confidential Information shall be the sole property of the Company. The Contractor hereby agrees not to disclose said data, information, any interpretations thereof, or data derivative there from or any information relating to Company's facilities, installations and operations etc to unauthorized parties or person. This Section also applies to any sub-consultant, assignee or consultants used by the Contractor. The obligations under these provisions shall survive the termination or expiry of this Contract.

- 15.2 Neither the Contractor nor any of its employees shall, except with the prior written consent of the Company, take ground or aerial photographs of the site, rig, installation or existing facilities of the Company.
- 4.3 The Contractor further undertakes that it shall not, except with the prior written consent of the Company:
- i) make any reference publicly, whether to the press or in books, brochures, internal publications, publicity material, magazines and periodicals or by advertisement through radio, television or films or by any other medium relating to:
 - a) the Contract or its terms and conditions,
 - b) the nature or extent of Services carried out by the Contractor,
 - c) the method, materials, or equipment used and personnel employed, or
 - d) any other Company information in the possession of the Contractor.
 - ii) disclose or convey any of the matters or information referred to in (i) above to any employees of the Contractor not directly concerned with the Contract.

SECTION 16. DEFAULT:

- 16.1 If the Contractor is unable or unwilling to perform its Services in accordance with terms of the Contract, the Company may obtain conforming Services from other sources, in which case, the Contractor shall be liable to the Company for the increased cost, if any, incurred by the Company for procuring such Services from other sources.
- 16.2 The Contractor shall also be in default under the Contract if the Contractor (a) fails to fully and timely perform any of its material obligations under the Contract (b) becomes insolvent or seeks relief under the bankruptcy laws.

SECTION 17. ARBITRATION:

- 17.1 If any technical question, difference or dispute arises under this Contract, the Parties shall use their best efforts to promptly resolve such dispute, controversy or disagreement. However, if the dispute continues, either Party may give written notice to the other for appointment of an expert to resolve the dispute. The expert shall be preferably a Pakistani national and shall have at least ten years of experience in the relevant technical field.
- 17.2 If any question, difference or dispute arises regarding the rights, obligations or performance by the Parties under this Contract, the Parties shall use their best efforts to promptly resolve such dispute, controversy or disagreement. This includes without limitation the question of whether one or the other is in default and what action if any shall be taken to remedy such default. If the Parties are unable to resolve such question, difference, dispute and controversy, the matter may be referred to arbitration. Either Party may notify the other in writing specifying the nature of the dispute and designate one arbitrator to whom such dispute shall be referred requesting that the other party give notice in writing within fifteen (15) days after receipt of the notice of designation of the second arbitrator. The two arbitrators shall within fifteen (15) days after the receipt of notice of the second arbitrator, appoint an umpire whose decision with respect to the dispute shall govern in the event that the arbitrators shall fail to agree. In the event that second arbitrator is not designated within the time specified, the first arbitrator shall have full and complete power to determine the dispute.
- 17.3 Arbitration shall be precedent in any action of law and that the provisions of the Arbitration Act, 1940 and rules framed thereunder shall apply. The venue of the arbitration shall be in Islamabad, Pakistan.

- 17.4 The expenses of arbitration shall be charged equally to the Parties unless the award of the arbitrator(s) or the umpire, as the case may be, otherwise provide.

SECTION 18. TERMINATION:

- 18.1 In the event of default by the Contractor, the Company shall have the right to terminate the Contract for cause, by giving written notice effective ten (10) days after the date of such notice, unless otherwise specified therein. If the Contractor cures such default within the ten (10) days period, or provides evidence to satisfy the Company that such default does not exist. In addition to any other remedy available under law or in equity, the Company shall be entitled to recover all actual damages, costs and losses incurred by the Company as a result of default by the Contractor.
- 18.2 The Company shall have the right to terminate the Contract, in whole or in part, without any cause at any time upon thirty (30) days' prior written notice. Upon receipt of such notice of termination, the Contractor shall promptly cease all further Services under the Contract with such exceptions, if any, specified in the notice of termination. The Company shall pay the Contractor for all Services performed and obligations incurred prior to the date of termination in accordance with the terms of the Contract.

SECTION 19. FORCE MAJEURE:

- 19.1 "Force Majeure" shall mean an unforeseeable event that impairs the ability of the Party affected by it to wholly or partially perform its obligations under this Contract. In the event of either party hereto being rendered unable, wholly or in part, by Force Majeure circumstances to carry out its obligations under this Contract, then such party by giving notice with satisfactory evidence of such Force Majeure circumstance(s) relied upon, the obligations of the party giving such notice so far as they are affected by such Force Majeure shall be suspended for the period during which the party, is rendered unable as aforesaid, but for no longer period. However, such notice must be given within fourteen (14) days of occurrence of Force Majeure event. The terms Force Majeure as employed herein, shall include but not be limited to acts of God or war, war whether declared or undeclared; acts of terrorism or sabotage, or public enemy; riots and insurrection; civil commotion; revolution; embargo, blockade, invasion or act of foreign enemies; epidemic; landslide, lightening, earthquake, loss of well, reservoir failure, change of law or policy; or any other cause beyond the control of the affected Party which materially and adversely affects the performance by such Party of its obligations under or pursuant to this Contract, other than to make payments due hereunder, acts of enemies, civil insurrection, fires, floods, earthquakes or other physical disasters, order or request of Government, blockade or embargo. It is however, clarified that strikes, lockouts, shortage or non availability of raw materials, rains disturbances, other labour disputes or non availability of transport shall not be included in the term "Force Majeure". During the established period of Force Majeure as contained hereinabove, the Contractor shall not be entitled to payment for Services and the Company shall not impose penalty.
- 19.2 In case the Force Majeure contingencies last continuously for more than one month, both parties will agree on the necessary arrangement for the further implementation of the contract. In case further implementation is unforeseeable and impossible, both parties shall arrange for the termination of the Contract, but without prejudice to their right and obligations prior to such termination it being understood that each party shall fulfill its contractual obligations so far as they have fallen due before the operation of Force Majeure.

SECTION 20. LICENSE, PERMITS, AUTHORIZATION AND CERTIFICATION:

The Contractor / Consultant hereby warrants and undertakes that all kinds of licenses, permits, authorizations and certifications required under the laws of Pakistan and applicable to the Contractor / Consultant are intact, valid and possessed by the Contractor / Consultant and shall be maintained during the performance of this Contract. The Company has the right to inspect, or demand for such licenses,

permits, authorization and certificates and the Contractor/ Consultant shall forthwith comply with such inspection on demand.

SECTION 21. PHOTOGRAPHY AND ADVERTISING:

- 21.1 The Contractor undertakes that neither the Contractor nor any of its employees shall, except with the prior written consent of the Company shall take, any ground or aerial photographs of the site, rig, installation or existing facilities at or around the work site.
- 21.2 The Contractor further undertakes that neither the Contractor nor any of the Contractor's personnel shall, except with the prior written consent of the Company:
- i. make any reference publicly, whether to the press or in books, brochures, internal publications, publicity material, magazines and periodicals or by advertisement through radio, television or films or by any other medium relating to:
 - the Contract or its terms and conditions,
 - the type or extent of the works, services, jobs required to be carried out by the Contractor,
 - the method, materials, or equipment used and personnel employed,
 - any information in the possession of the Contractor as to the operations of the Company.
 - ii. Disclose or convey any of the matters or information referred to in (a) above to any employees of the Contractor not directly concerned with the Contract.

SECTION 22. SECURITY:

- 22.1 Company shall provide appropriate site security including, as from time to time may be necessary, security personnel and security services at the work site or during transportation of personnel and equipment to and from the work site.
- 22.2 It is the express intent of the Parties that any delay in the performance of Services or provision of equipment, or part thereof related directly or indirectly to security issues shall under no circumstances be deemed a breach of Contractor's obligation under the Contract.

SECTION 23. INSURANCE DEMURRAGE:

- 23.1 The Contractor shall within seven (07) days of the date hereof take out and shall maintain until maturity of the Contract, standard insurance policies, which shall include Contractor's waiver of subrogation as follows:
- (a) Worker's compensation insurance covering all employees, engaged directly or indirectly in the performance of the Services in accordance with the applicable statutory requirements of the state or nation having jurisdiction over such employees.
 - (b) All risk insurance cover for the Services and Equipment including without limitation Equipment and machinery and other materials, if any supplied hereunder by the Contractor.
 - (c) The foregoing insurance shall be maintained with insurers that are satisfactory to the Company, and the terms of coverage for the foregoing insurance shall also be satisfactory to the Company and shall be evidenced by certificate to be furnished to Company. Such certificates shall provide that ten (10) days written notice shall be given to Company prior to cancellation of any policy. In the event the Contractor fails to effect or keep in force the insurances then the Company without prejudice to any other rights, shall effect and keep in force such insurance's at the Contractor's cost and risk.
 - (d) It shall be the duty of the Contractor to notify the insurers of any insurance referred to above or of any matter or event, which by the terms of such insurance are required to be so notified.

23.2 The Contractor shall indemnify the Company against all suits, proceedings, claims, liens and demands whatsoever which may be made against the Company by the third parties for or in respect of out of any failure by the Contractor in performance of its obligation or wrongful performance under this Contract or any act or omission in connection therewith. Should Company have to pay any moneys in respect of any such claims or demands, the amounts to be paid and the costs incurred by the Company in connection therewith, shall be charged to and paid by the Contractor in full.

SECTION 24. EMPLOYMENT OF PAKISTANI NATIONALS

The Contractor shall employ qualified Pakistani nationals for its Services, if available. If necessary, Contractor may employ expatriate professionals only after making all out efforts to employ Pakistani nationals. The Contractor shall make reasonable efforts to train Pakistani nationals in order to gradually replace its expatriate staff. Unskilled workers if needed for the Services shall be hired from the area where the Services are being performed.

SECTION 25. ASSIGNMENT:

The Contractor shall not sub-contractor or assign either whole or part of its obligations under this Contract without the prior written consent of the Company and such consent if given shall not relieve the Contractor from any liability or obligation under this Contract. The Contractor shall be responsible for the acts, defaults and negligence of any sub Contractor, its personnel or agents as fully as it they were the acts, defaults or negligence of the Contractor, or its personnel.

SECTION 26. ENTIRE CONTRACT:

The documents mentioned in Section-3 of this Contract constitute the entire understanding between the Company and the Contractor on the subject matter and supersede all prior discussions, communications and agreements regarding the subject matter, whether written or oral.

SECTION 27. AMENDMENTS:

No variation in or modification of the terms of this Contract shall be made except by written amendment signed by the duly authorized representative of the Company and the Contractor.

SECTION 28. GOVERNING LAW:

This Contract shall be construed, interpreted and governed by the laws of the Islamic Republic of Pakistan.

SECTION 29. ERADICATION OF CORRUPTION:

All vendors, Suppliers, Contractors, Consultants and alike are encouraged to inform the Managing Director and Heads of Departments in case where any Company's employee asks for any type of favour whether monetary or in kind. You can contact the M.D. and Heads of Departments on the following addresses, phone numbers, faxes or e-mail:

- i MD & CEO
Oil & Gas Development Company Limited
OGDCL House, Blue Area, Islamabad.
Tel No. 051-9209701
Fax No. 051-9209708
E-mail: md@ogdcl.com

- ii GM (SCM)
Tel No. 051-920023539
Fax No. 051-9209859

SECTION 30. NOTICES:

Any notice, request demand, statement, call, question, intimation, reference, or other Communication required for execution of this Contract shall be made in writing and shall be directed by courier service or facsimile to the address of the Parties as follows:

To the Company: GM(HSEQ)
 Oil & Gas Development Company limited
 OGDCL House, Jinnah Avenue, Sector F-6
 Blue Area, Islamabad, Pakistan
 Telephone: 0092 - 51-920023612
 Facsimile: 0092 - 51- 2623041

To the Contractor: Mr. _____.
 M/s _____.
 Address:- _____
 _____.
 Telephone: 0092 -
 Facsimile: 0092 -

Notices shall be deemed served when received by the addressee.

IN WITNESS WHEREOF, the Parties hereto have executed this Contract as of the date first above written.

COMPANY	CONTRACTOR
Signature _____	Signature _____
Name _____	Name _____
Position _____	Position _____
Witness _____	Witness _____
Witness _____	Witness _____