OIL & GAS DEVELOPMENT COMPANY LIMITED
REQUEST FOR QUOTATION
(SERVICES)

OGDCL House, Jinnah Avenue, Islamabad Pakistan

Description: **Hiring of Services for 2D Seismic Data Reprocessing Upto Pre-Stack Time Migration**
RFQ No.: PROC-SERVICES/CB/EXPL--6400000053/2022
Bidding Procedure: Single Stage Two Envelope
Final Evaluation Criteria: Quality & Cost (**80%** weightage for Technical Evaluation & **20%** for Financial Evaluation)
Tax: Inclusive of all applicable taxes except ICT/PST.
Bid Validity: 180 days from Technical bid opening.
Bid Bond Amount: USD 4,260/-
Bid Bond Validity: 210 days from Technical bid opening.

Item No.	Description	Unit	Qty	Total Price (USD)
10	Hiring of Bostan 2D Data re-processing	AU	1	

			Quantity			
Sub No	**Service No**	**Service Description**	**Quantity**	**Unit**	**Unit Price Per L.km (2D)**	**Total Price**
10.1	20000134	Pre-Stack Time Migration	568.00	Kilometer		

TERM OF REFERENCE

FOR

HIRING OF SERVICES FOR 2D SEISMIC DATA REPROCESSING UPTO PRE-STACK TIME MIGRATION

1. Introduction:

Bostan E. L comprising an area of 2337.50 Sq. Kms falls in Pishin, Qilla Abdullah, Quetta & Ziarat districts of Baluchistan Province. Oil & Gas Development Company Limited (OGDCL) is the Operator of the block with working interests of 100%. The map of the area is shown as below.

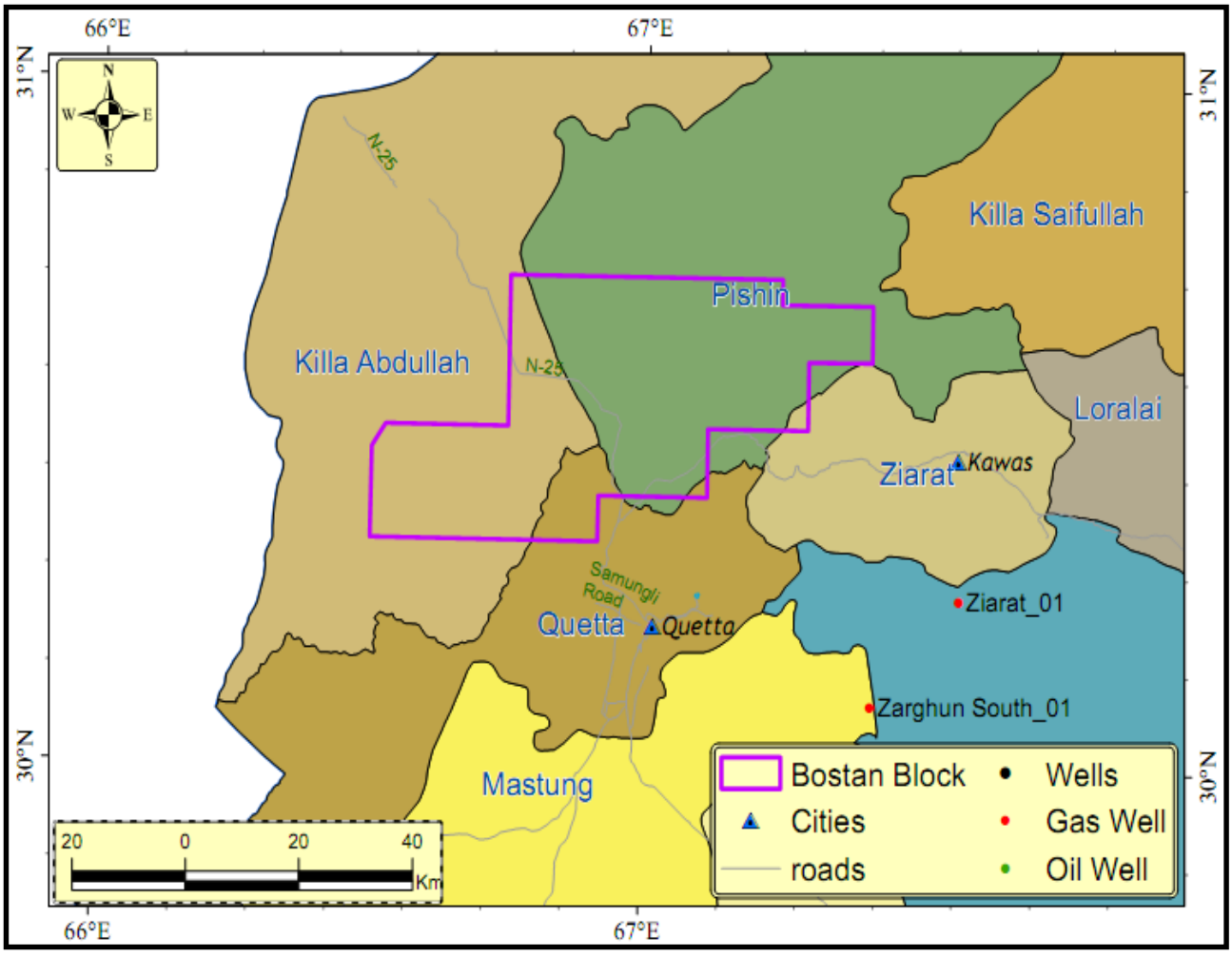

Figure-1: Project area latitudes and longitude on map

BostanE.L boundary Coordinated						
Coordinates are in WGS84						
	Latitude			Longitude		
	Degree	Min	sec	Degree	Min	sec
A	30	28	00.00	66	30	00.00
B	30	30	00.00	66	31	30.00
C	30	30	00.00	66	45	00.00
D	30	43	15.00	66	45	00.00
E	30	43	15.00	67	15	00.00
F	30	41	00.00	67	15	00.00
G	30	41	00.00	67	25	00.00
H	30	36	00.00	67	25	00.00
I	30	36	00.00	67	18	00.00
J	30	30	00.00	67	18	00.00
K	30	30	00.00	67	07	00.00
L	30	24	00.00	67	07	00.00
M	30	24	00.00	66	55	00.00
N	30	20	00.00	66	55	00.00
O	30	20	00.00	66	30	00.00
A	30	28	00.00	66	30	00.00

2. Bostan Geological Framework:

The Bostan block is located in Pishin (also known as Kakar Khorasan) Basin. It is bounded to the west by Chaman Fault separated from the Helmand Block of Afghanistan and to the east by Ghazaband Fault, the Zhob valley Thrust and the West Waziristan Faults separating it from Suleiman Fold Belt. Flysch sediments are exposed in the core of folded structures which are bounded by longitudinal faults.

The general character of the project is mountainous. Its northern half is covered by Toba Plateau. The mountains are fairly uniform, with long central ridges from which frequent

spurs descend. These spurs vary in elevation from about 1,500 to 3000 meters.

The Bostan EL includes mainly the part of southwestern Pishin Basin (Kakar Khorasan Basin) and some part of Quetta Syntaxis of the Sulaiman Fold Belt. The stratigraphic units exposed in these tectono-stratigraphic domains have distinctive facies variations and lithological characters. Eocene to Pliocene-Pleistocene rocks are exposed in Kakar Khorasan basin while Triassic to Pliocene-Pleistocene rocks are exposed in Sulaiman Fold Belt of the Project Area.

3. Bostan 2D Seismic Project:

A total of Approx. 567.55 L.km (Surface coverage) has been acquired in Bostan E.L. In order to investigate and delineate structural traps total 15 seismic lines (11 dip lines and 04 strike lines) have been acquired in the E.L. by OGDCL's own seismic crew.

a. Base Map showing acquired 2D Seismic Lines in Bostan E.L is given as below;

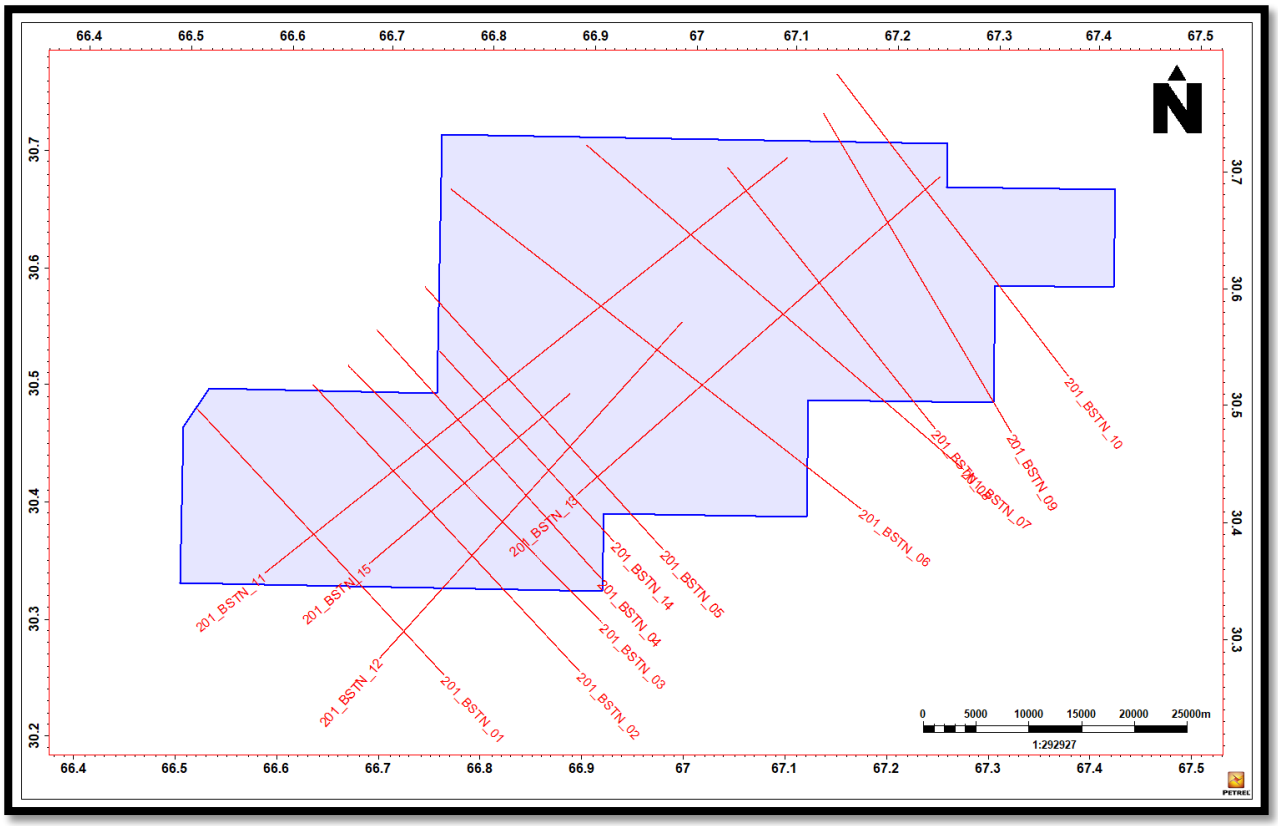

Figure-2: Base map of project area

b. The details of 2D seismic lines with tentative line kms of Bostan project as per below table.

Line Name	L.Kms
BSTN-01	32.05
BSTN-02	37.2
BSTN-03	34.35
BSTN-04	31.8
BSTN-05	33.7
BSTN-06	46.35
BSTN-07	47.15
BSTN-08	31.7
BSTN-09	35.2
BSTN-10	36.15
BSTN-11	63.5
BSTN-12	42.85
BSTN-13	45.8
BSTN-14	24.6
BSTN-15	25.15
Total L.km	567.55

Table-2: Project lines and its length in Kilometers

c. Seismic acquisition parameters of Bostan E.L. 2D Seismic Project are:

Geometry

- Geometry System: Symmetric Spread
- Minimum Inline Offset: +-37.5 m
- Maximum Offset: 6012.5 m
- Nominal Full Fold: 120
- Live Channel: 480
- Receiver Interval (RPI): 25 m
- Source Interval (SPI): 50m

Receiver

- No. of Geophones/ traces: 24
- Geophone array: Linear
- Geophones per array: 24, 2 strings
- Geophones per string: 12
- Array length: 23.92 m
- Geophone Interval: 1.04 m
- Group Interval: 25 m

Source

- Mode of Energy: Vibroseis & Dynamite

For Dynamite

Deep hole

- No. of Holes: Single Deep hole
- Depth of hole: 18m
- Charge Size: 08 Kg * 3 pcs Detonators

Pattern hole

- No. of Holes: 03 holes
- Depth of hole: 6m
- Charge Size: 06 Kg * 6 pcs Detonators

POP Shot

- No. of Holes: 8 linear holes each with 1.5 m deep apart
- Charge size for Pop shot: 01 kg with one detonator per hole

For Vibroseis

- No. of Vibrators: 04
- Sweep Pattern: Standing
- Sweep Length: 12 Sec
- No. of Sweeps: 08
- Sweep Frequency: 08-80 Hz Sweep Type

Vibrators Array Linear, along source line Standing

Array length 45m (from the first pad to the last pad and depend on terrain)

W-Z Parameters

- Refraction interval: 2.5 km
- Recorder Type: Geometrix NZ xp
- Recording Format: DAT
- Recording Length: 512 ms
- Sample Rate: 250 μs

LVL:

- Length of spread: 163 m
- No. of Channels: 24
- Minimum offset: 1 m
- Maximum offset: 162 m
- Channel interval: 1m,1m,1m,2m,2m,3m,5m,7m,10m,10m,15m,15m, 20m,15m,15m,10m,10m,7m,5m,3m,2m,2m,1m,1m,1m,
- Source Type: Explosive 2 shots (one on either side of spread)

Uphole:

- Drilling Depth: 55m
- Logging Depth: 50 m
- No. of Channels: 12
- Sensor Layout: S-type
- Offset from hole: 1m x 4 geophone, 3m x 4 geophone, 5m x 4 geophone
- Logging interval: 1m, 2m, 3m, 6m, 9m, 12m, 15m, 18m, 21m, 24m, 27m,
- 30m,35m, 40m, 45m, 50m
- Source Type: Explosive inside holes (total 16 shots)
-

Supporting documentation:

Observer reports, Survey listings (Co-ordinates / elevation lists), SPS files, W-Z data

/ Up-hole data

4. Scope of Work:

a) The 2D processing services shall include processing up to PSTM level.

The Contractor shall process the data as per sequence of **Annexure-I**, along with other advance processing modules offered by the contractor.

b) The data is required to be processed at 2ms sampling interval with full record length of 6 seconds along with true amplitude recovery.

c) The contractor shall use the state-of-art computer system with internationally used software capable of carrying out 2D time processing by deploying professionals having seismic data processing experience as per **Annexure-IV.** The contractor shall provide digital data of all the outputs, experimentation, intermediate and final processing, in acceptable format loadable on workstation for QC & interpretation. The contractor shall provide final deliverables, as mentioned in **Annexure-III**. The contractor would provide weekly progress report along with Gantt chart in a timely manner.

d) Contractor will execute the complete project within turnaround time given in the TOR.

5. Objectives:

a) The primary objective of seismic data processing is to have best quality data in Time.

b) A high quality 2D seismic data with free of multiples, enhanced S/N Ratio and improved frequency band width.

c) Define accurate Reflector Character in terms of vertical and horizontal resolution & continuity.

d) To improve the overall resolution and continuity of seismic data and properly image the subsurface configuration.

e) Identify and map major and minor faults with respect to shallow and deep Exploration/Development targets. Fault definition and horizon continuity is extremely critical in the project area.

f) To have a data set in terms of broadband preserved amplitude, phase, frequency and statics to be used for structural interpretation.

6. Seismic Data Processing Sequence:

The processing steps would be required to be applied in manner so that amplitude, frequencies and phase of the data remain preserved and output yield is of enhanced S/N ratio, improved broadband spectrum and high resolution. However, a proposed standard processing sequence for PSTM is provided in the **Annexure-I** and can be modified according to the requirement with no cost effect. However, the actual sequence will be determined at each step of processing in consultation with the company representatives.

7. Test Line Processing

The bidders would process one test line (BSTN-04 of about 31.8 L.km) from Bostan E.L 2D Seismic plan for free of cost up to PSTM level. Maximum turnaround time for test line processing will be 6 weeks from the date of handing over data to bidders. Test line processing received after 06 weeks will not be entertained for any further evaluation. No exception will be accepted after bids submission and strict compliance of TOR will be adhered.

8. Parameters Testing/QC:

The contractor shall submit the data in the form of power point presentation(s) and SEG Y for comparison of qualitative results and decision making. The contractor would be required to submit its recommendations regarding processing sequence/parameter selection. The final decision, however, would be of the Company. The Company's professionals will participate in the project for QC purpose at the stages as proposed in the **Annexure-IV (Cat. No. 7).** The contractor would be required to provide the QC display of each processing step after extensive testing in order to select the optimum parameters if there is some additional information obtained from testing then that will also be included, the company can ask for the provision of data in SEGY/PPT/TIFF/CGM etc. as and when required without any additional cost.

9. Rates of Processing

The contractor shall specify Lump sum rates in US $ per L. Km for 2D up to Pre-stack Time Migration as per **Annexure-II**. The processing rate should be inclusive of all taxes, duties, courier charges, levy etc. and deliverables as per **Annexure-III** except Provincial Sales Tax/ICT Tax on Services in Pakistan. Any additional processing module may be applied in processing flow for improvement of data quality with mutual consent of the company and contractor without affecting the cost of the project.

10. Technical Evaluation Criteria:

a) The Technical evaluation will be based on the technical evaluation tables **Annexure-IV and Annexure-V**. The only bidders that fulfill mandatory requirements as per Annexure-IV will be considered in further technical evaluation, Annexure-V. The bidders will have to pass (70% marks) in technical evaluation, Annexure-V. The potential bidders are required to strictly follow the sequence of Technical Evaluation Criteria and submit their proposals accordingly.

b) For final bid evaluation, 80% weightage would be given to Technical Evaluation **Annexure-V** and 20% weightage would be given to Financial Evaluation **Annexure-II**. The lowest bidder will attain the maximum points in financial evaluation and others would be ranked on sliding scale. The points obtained in technical evaluation, and financial evaluation will then be combined and the contract will be awarded to the bidder obtaining maximum points.

c) The contractor must have adequate experience in 2D seismic data processing especially in the Fold & thrust belt regimes.

d) The contractor must have workable project schedule and turnaround time for 2D Project. The bidders should submit project schedule in the form of Gantt chart.

e) The contractor must provide schedule for the participation of professionals from the Client for the QC of the processing steps. Contractor shall provide a phase wise work program for the participation of the client professionals in line with Annexure-IV, Contractor will be bound to take all necessary measures to facilitate the Client's participation process. Any delay due to visa, air tickets etc. will be accommodated by the contractor, however cost of traveling and lodging will be borne by the Client.

11. Period of Contract

The contractor is required to make sufficient arrangements to perform the task within the time frame of 06 months processing time up to PSTM level and additional 01 month is for Deliverables.

12. Data Confidentiality / liability

The contractor shall be solely responsible for secrecy, loss or damage of data due to any reason including fire, theft etc. of any documents/cartridges/soft copies and other important documents /CDs etc. pertaining to the contract while in their custody or control. Neither contractor is liable to reproduce the same data for any other business reasons other than specified by the Client.

Basic/Standard Processing Sequence for 2D PSTM Processing

The main basic processing steps to be taken into account: The contactor will process the land 2D seismic data through following basic processing sequence which also forms the basis for price quotation. The proposed basic processing steps to be performed are listed below:

Sr. No.	Time Processing Sequence
1.	Reformat
2.	Geometry application and QC attributes
3.	Geometry update & QC
4.	True Amplitude Recovery
5.	Manual and Automatic Trace Editing
6.	Despike / Wild Noise Removal
7.	Coherent/Non Uniform Coherent noise removal in different domains
8.	Scattered/dispersive, random and high frequency noise attenuation, preserving amplitude
9.	Multiple Attenuation
10.	Refraction Static computation and application (Refraction tomography and Diving Wave tomography etc.)
11.	Inverse Q Filtering (Q compensation)
12.	Surface consistent amplitude compensation (SCAC)
13.	Surface consistent Deconvolution/Robust Deconvolution
14.	1st Velocity analysis every at 1.0 Km
15.	1st pass of Surface Consistent Residual Static Correction
16.	2nd Velocity Analysis at 0.5 Km
17.	2nd pass of Surface Consistent Residual Static Correction
18.	3rd Velocity analysis if required and more passes of residual static
19.	Pre-stack Random noise attenuation in different modes
20.	Pre stack signal enhancement
21.	Final Stack, Filtering and Scaling
22.	Post stack Signal Enhancement
23.	Spectral enhancement

24.	Post Stack Time Migration
25.	Noise attenuation before PSTM
26.	Final gather conditioning and velocity preparation for initial Pre-Stack Time Migration
27.	Initial PSTM (1st Pass/PSTM 1st Run)
28.	First PSTM Velocity analysis at 0.5 Km
29.	2nd pass PSTM (PSTM 2nd Run)
30.	2nd PSTM Velocity analysis at 0.5 Km (Velocity analysis with higher order NMO)
31.	If required, more passes of Pre-stack Time Migration (Anisotropic Turning-Wave Kirchhoff) and Velocity analysis with higher order NMO correction in order to have adequate results.
32.	Final PSTM (Anisotropic Turning-Wave Kirchhoff) & Final PSTM Stack
33.	Filtering and Scaling on Final PSTM Stack

NOTE:

- All final output will have to be in zero phases and SEG standard normal polarity.
- Any advance processing module suggested by bidder to be used in place of above mention module that gives best results will be free of cost.
- Processing sequence may be changed if required for better results.

Financial Bid Format

Rates for land 2D seismic data Time Processing (PSTM) shall be provided as per given table.

Processing Sequence Description	KM	COST in US$ per L. km (2D)	Total Cost in US$ for 568 KM
Time Processing Sequence as per **Annexure-I** (Lump Sum)	**568**		

NOTE:

i. *The contractors should provide the list of all advance processing modules not used in test Line processing and should be bound to use these modules for improvement of data free of cost if needed during processing.*

ii. *Financial bids will be evaluated on the basis of total cost in the Annexure-II, on the basis of lump sum turnkey rate (LSTK) basis.*

iii. *Invoices need to be generated for Annexure-II. Payments will be made at actual after successful completion of the project against the verified invoices.*

iv. *Prices must be quoted inclusive of all Taxes, duties, courier charges and levy etc. except provisional sales tax / ICT Tax on services where applicable will be borne by OGDCL at actual.*

v. *The test line processing results (Final, POSTM and PSTM stacks) including Different Vel percentage of test line including SEG-Y, velocity (ASCII & SEG-Y) & report will be provided either on Hard disk or through FTP soon after completing the job as per time frame mentioned in Annexure-V. Final project deliverables will be delivered according to Annexure-III within one month.*

Annexure-III

Deliverables for the Project

Sr. No.	Description	Format	Recommended Media	No. of Copies.
1.	a) First Break Picks b) Refraction Statics	ASCII	DVD	03 sets
2.	a) Final Stacks (Unmigrated) with Post Stack Sequence b) Final Stacks (Unmigrated) without Post Stack Sequence	SEGY	HD & LTO	Three sets on HD and three sets on LTO
3.	a) Final POSTM Stacks with Post Stack Sequence b) Final POSTM Stacks without Post Stack Sequence	SEGY		
4.	a) Final PSTM Stacks with Post Stack Sequence b) Final PSTM Stacks without Post Stack Sequence	SEGY		
5.	a) Final PSTM stacking Velocity (ASCII) b) Final PSTM stacking Velocity (SEG-Y)	SEG-Y & ASCII		
6.	a) Final PSTM CMP gather with NMO Correction Without Post Stack Sequence b) Final PSTM CMP gather without NMO Correction Without Post Stack Sequence	SEGY		
7.	a) Final Un-migrated CMP gather with NMO Correction Without Post Stack Sequence b) Final Un-migrated CMP gather without NMO Correction Without Post Stack Sequence	SEGY		
8.	PSTM Processing Report	MS Word/ PDF	DVD & Hard Copy	03 sets on media

Technical Requirements for Company Profile

Cat No.	Description of Technical Information	Min. Qualifying Criteria	Requirement
1	**Company History & Profile (mention the list of projects executed in the mentioned time span)**		
	No. of Years in PSTM Processing of land 2D Seismic Data belonging to Fold and thrust Belt (compressional regime) area	Minimum 05 years	Mandatory
	No. of land 2D projects for PSTM in the last 5 years in the fold and thrust Belt (compressional regime) area (Please provide Client list as per **Annexure VII**)	Minimum 05 projects	Mandatory
	Number of processing centers worldwide (Detailed Locations must Provide as per **Annexure VIII**)	Minimum 01 Processing center	Mandatory
2	**Processing Facilities Software and Work Flows**		
	Software Name and version as per **Annexure-IX**	Software Version not more than 03 years old	Mandatory
	Details of PSTM processing sequence for mentioned project including optional steps as per **Annexure-I**	Covers minimum 90% of proposed processing flow for PSTM	Mandatory
3	**Hardware**		
	Provide List of hardware / machines / equipment in operating condition owned by the company, available with contractors used in land 2D seismic data PSTM processing as per **Annexure-X**	Hardware/equipment version not older than 05 years	Mandatory
4	**Manpower (Qualification of 16 Years Degree in Geophysics/ Geology) and having experience in 2D PSTM Processing**		

	Attach the resume of the contractor permanently employed manpower for land 2D PSTM processing projects (Give complete detail experience belonging to Fold and thrust Belt as per **Annexure-VIII**).	At least 05 professionals with experience of 5-10 years	Mandatory
5	**Work Plan/Project Schedule**		
	Maximum Turn Around Time for Full Project from the date of handing over the data to the successful bidder	Total Turn Around Time 06 Months Processing time + 01 months for Deliverable	Mandatory
6	**TOR Compliance**	Bid Prepared as per TOR Format 100 % Compliance	Mandatory
7	**OGDCL professional participation in the 2D seismic data processing PSTM project.**		
	Submit workable QC schedule for OGDCL professionals.	1. Noise Attenuation, Refraction Statics, 1st Vel Analysis. (Two professionals for two weeks) 2. During Final Pass of Velocity Analysis and PSTM for 2D processing (Two professionals for two weeks)	Mandatory

MANDATORY REQUIREMENTS:

1. The bidders not meeting mandatory requirements as per Annexure-IV will not be included in any further evaluation. Seismic data for test processing would only be given to the bidders who have meet the mandatory requirements.
2. Contractor/ bidder shall not be eligible if the Contractor / bidder including any of its shareholders, directors, employees, partners, associated company or affiliated company is involved or has been involved in the past in litigation with OGDCL.
3. Seismic data processing companies and team leaders must have an experience of on-shore projects as per Annexure-IV.
4. Filling of Questionnaire as per Annexure-VI.
5. Compliance to HSE policy is mandatory.

NOTE:

1. Contractor should allocate dedicated team for OGDCL projects. At the time of award of contract contractor shall ensure to provide professionals of same level on which they have been awarded the contract.
2. In case of JV, the JV leader should be professionally a Processing Company and JV agreement may be provided with the bid. Experience of Lead partner will be counted.
3. For the execution of the project, contractor should provide the processing team from the list of professionals mentioned at Annexure-IV, category 4.
4. The bidders must submit soft copy of bid document in pdf/ word along with hardcopy.

Annexure-V

Technical Evaluation Criteria for Test Line

The bidders would process test line **BSTN-04 (31.8 L. Km)** free of cost up to PSTM. The test Line will be handed over to bidders, through OGDCL FTP who have submitted their bids against this Tender Enquiry after Technical bid opening. Maximum turnaround time for test line processing will be 6 weeks from the date of handing over data to bidders. Test line processing results received after 06 weeks will not be entertained for any further evaluation.

Following criteria shall be used for evaluation of test Lines processing results:

Sr.	Description	KPI's	KPI's (Marks)	Total Marks
1	Final Unmigrated (With Post Stack Processing) & Final Unmigrated Stack (Without Post Stack Processing) image quality of line.	Quality of Signal to noise ratio	Excellent = 6, Very Good = 5 Good = 4, Average = 3 Below Average = 2, Poor = 0	6
		Fault plan Resolution	Excellent = 6, Very Good = 5 Good = 4, Average = 3 Below Average = 2, Poor = 0	6
		Structural Imaging	Excellent = 6, Very Good = 5 Good = 4, Average = 3 Below Average = 2, Poor = 0	6
		Overall Reflector Continuity /Coherency	Excellent = 6, Very Good = 5 Good = 4, Average = 3 Below Average = 2, Poor = 0	6
			Sub-Total	**24**
2	Final POSTM Stack (With Post Stack Sequence) & Final POSTM Stack (Without Post Stack Sequence) image quality of line.	Quality of Signal to noise ratio	Excellent = 6, Very Good = 5 Good = 4, Average = 3 Below Average = 2, Poor = 0	6
		Fault plan Resolution	Excellent = 6, Very Good = 5 Good = 4, Average = 3 Below Average = 2, Poor = 0	6
		Structural Imaging	Excellent = 6, Very Good = 5 Good = 4, Average = 3 Below Average = 2, Poor = 0	6
		Overall Reflector Continuity /Coherency	Excellent = 6, Very Good = 5 Good = 4, Average = 3 Below Average = 2, Poor = 0	6
			Sub-Total	**24**

3	Final PSTM Stack (With Post Stack Sequence) & Final PSTM Stack (Without Post Stack Sequence) image quality of line.	Quality of Signal to noise ratio	Excellent = 12, Very Good = 10 Good = 8, Average = 6 Below Average = 4, Poor = 0	12
		Fault plan Resolution	Excellent = 12, Very Good = 10 Good = 8, Average = 6 Below Average = 4, Poor = 0	12
		Structural Imaging	Excellent = 12, Very Good = 10 Good = 8, Average = 6 Below Average = 4, Poor = 0	12
		Overall Reflector Continuity /Coherency	Excellent = 12, Very Good = 10 Good = 8, Average = 6 Below Average = 4, Poor = 0	12
			Sub-Total	**48**
4	Turn Around Time for test line processing from the date of handing over data to bidders	Processing time within 04 weeks = 04 marks Processing time within 06 weeks = 02 marks Processing time more than 06 weeks = 00 marks (more than 06 weeks will be considered as disqualified for further evaluation)		**4**
TOTAL MARKS (Qualifying Marks 70%)				**100**
80% Weightage of Total Marks Obtained				

NOTE:

The technical evaluation as per the defined criteria in **Annexure-V** will be based on the qualitative marking on the results of the test line processing carried out by the potential bidders.

Annexure-VI

Questionnaire

Sr#	Questions		Answers
1		Registered Name of the Firm/Company.	
2		Permanent Address of Head Office and Branch Offices (if any) with telephone no(s)/fax no(s).	
3		Date and place of establishment of Company. (Please attach appropriate proof)	
4		Name and address of Foreign Associates (if any)	
5		Name, Designation and Qualifications of the person(s) authorized to represent the firm in Contractual Matters. (Authorization letter from Chief Executive of the Firm to be attached).	
6	a	Financial status of the Company with supporting documents.	
	b	Last 3 years audited financial statements of the Company. (Please attach Audit Reports with the Balance Sheets).	
	c	NTN Certificate and statement/proof of income tax deduction for last 3 years. (Please attach copies)	
7		Name and address of the Bankers	
8		Performance of the firm on at-least 5 recently completed jobs / contracts of similar nature (Certificates of satisfactory performance from organizations/owners to be attached)	
9		Average turnaround time for about 550 L.km (Approx.) 2D PSTM project. Mention turnaround time for last 05 similar projects along with project volume.	
10		Availability of Innovational processing flow for any processing project	
11		Do you have a facility for remote/interactive data QC?	
12		Do you have a facility for Video Conferencing?	
13		Do you have 2D seismic data visualization facilities?	
14		Do you have an FTP site for transfer of data from processing centers to clients office for QC	
15		Details of litigations/cases in which the Company has been involved.	

16		Any other information.	
Note	1	List of Facilities, ownership of contractor's machineries/equipment, availability of technical and skilled personnel, support capabilities and experience of the contractor may be checked and verified physically through technical audit.	
	2	Mis-statement by the contractor will lead to subsequent disqualification at any stage.	

Annexure-VII

List of Projects/Contracts during the Last Five Years

(Mention complete detail of 2D PSTM processing projects belonging to Fold and thrust Belt)

S.NO.	CLIENT NAME With address , email & Contact Number	SATISFACTORY REPORT OF THE CLIENT	DESCRIPTION OF WORK	AMOUNT (Million US $)	CURRENT STATUS OF THE CONTRACT	VALIDITY	
						FROM	TO
1.							
2.							
3.							
4.							
5.							

Annexure-VIII

List / Resume of Manpower Permanently Employed by the Contractor

Center -1. Location and List of Resume of Staff

(Mention complete detail experience of 2D PSTM processing belonging to Fold and thrust Belt

S.NO	NAME OF PROFESSIONAL	DESIGNATION	ACADMIC QUALIFICATION (YEARS)		PROFESSIONAL EXPERIENCE	MENTION PROJECTS DETAIL
			DEGREE	OTHER		
1						
2						
3						
4						
5						
6						
7						
8						

Center -2. Location and List of Resume of Staff

(Mention complete detail experience of 2D PSTM processing belonging to Fold and thrust Belt

S. DETAIL NO	NAME OF PROFESSIONAL	DESIGNATION	ACADMIC QUALIFICATION (YEARS)		PROFESSIONAL EXPERIENCE	MENTION PROJECTS
			DEGREE	OTHER		
1						
2						
3						
4						
5						
6						
7						
8						

Center -3. Location and List of Resume of Staff

(Mention complete detail experience of 2D PSTM processing belonging to Fold and thrust Belt

S.NO	NAME OF PROFESSIONAL	DESIGNATION	ACADMIC QUALIFICATION (YEARS)		PROFESSIONAL EXPERIENCE	MENTION PROJECTS DETAIL
			DEGREE	OTHER		
1						
2						
3						
4						
5						
6						
7						
8						

Annexure-IX

Details of Software used by the contractor for 2D land Seismic Processing

S.NO.	SOFTWARE NAME	ACQUIRED BY THE COMPANY ON	QUANTITY	VERSION YEAR	REMARKS
1.					
2.					
3.					
4.					
5.					
6.					

Annexure-X

Details of hardware used by the contractor for 2D land Seismic Processing

S.NO.	HARDWARE NAME	ACQUIRED BY THE COMPANY ON	QUANTITY	CONDITION	REMARKS
1.					
2.					
3.					
4.					
5.					
6.					