OIL INDIA LIMITED
(A Govt. of India Enterprise)
RAJASTHAN PROJECT
JODHPUR


OIL INDIA LTD (OIL), a premier National Oil Company, is engaged in the business of exploration, production & transportation of crude oil and natural gas for over five decades. It is a Navratna Company under Ministry of Petroleum and Natural Gas, Government of India and the second largest National Oil Company in the country. In Rajasthan, OIL is engaged in exploration in NELP Blocks in addition to production of natural gas.

Oil India Limited (OIL), as Operator and on behalf of its JV partners in NELP-VII Block: RJ-ONN-2005/2 located in Jaisalmer district in Rajasthan invites Expression Of Interest (EOI) for meeting prequalification criteria for empanelment/short-listing of contractors for issue of tender document for hiring of Services for Interpretation of 3D Seismic Data for Evaluation & Identification of Prospects for Exploration Drilling in NELP-VII Block: RJ-ONN-2005/2, in Jaisalmer District, Rajasthan from prospective parties as mentioned below.

2.0 PROJECT INFORMATION:

As per committed MWP to the Govt. of India, Oil India Ltd. (OIL), being the Operator in the above-mentioned NELP block, has to carry out Interpretation of 3D Seismic Data for Evaluation & Identification of Prospects for Exploration Drilling within the stipulated time frame. Oil India Limited (OIL) intends to carry out workstation based interpretation of 3D Vibroseis Seismic Data (56 Fold) of NELP-VII Rajasthan Block: RJ-ONN-2005/2 using latest interpretation systems through tendering process. The quantum of seismic data likely to be available for interpretation is 56 Fold (Full fold) 3D data of 1517 Sq. Km. The service provider is also required to utilize 108 Sq. Kms (Source Surface Area, Nominal Fold:52) of High Resolution (HR) 3D seismic data, if available, for evaluation and identification of prospects in the block. The interpretation of seismic data is to be taken up for evaluation and identification of prospects to generate drillable exploratory locations.

3.0 GEOLOGY OF THE AREA:

The area of operation falls in the Thar Desert covered with sand dunes of Western Rajasthan. The geological formations expected to be encountered in the proposed wells of Block: RJ-ONN-2005/2(NELP-VII) area are unconsolidated to semi-consolidated Alluvium and Shumar with clay bands (Recent to Pleistocene) to a depth varies from 20-350 m, shallow marine fossiliferous Limestone & Sandstone of Bandah formation (Eocene) to a depth varies from 30-400 m, Shale and Foraminiferal Limestone/Coarse blanket type Limestone of Khuiala and Sanu formations (Paleocene) to a depth varies from 125 – 630 m, fossiliferous Marl and fossiliferous Sandstone of Parh and Goru formations (Upper Cretaceous) to a depth varies from 145 – 880 m, alteration of Sandstone and Shale of Pariwar formation ( Lower Cretaceous) to a depth varies from 380 – 1100 m, and marine Shale with Sandstone of Badesir-Baisakhi formation, marine Limestone and Sandstone of Jaisalmer formation of Jurassic age to a depth varies from 750 – 2500 m. The proposed wells may be terminated at Badesir – Baisakhi/ Jaisalmer formation.
4.0 LOCATION OF THE AREA:

The block: RJ-ONN-2005/2 is situated in the Rajasthan state and covers an area of 1517 sq km (Refer Figure-1). Jaipur is the Capital city of Rajasthan and is well connected to other places in India by air, road and railways. The nearest international airport is located in New Delhi, the Capital city of India. The proposed area lies in between the following broad co-ordinates:

**Coordinates of Block : RJ-ONN-2005/2**

<table>
<thead>
<tr>
<th>Points</th>
<th>Latitude (N)</th>
<th>Longitude (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deg.</td>
<td>Min.</td>
</tr>
<tr>
<td>A</td>
<td>27</td>
<td>39</td>
</tr>
<tr>
<td>B</td>
<td>27</td>
<td>39</td>
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<tr>
<td>C</td>
<td>27</td>
<td>36</td>
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<tr>
<td>D</td>
<td>27</td>
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<td>G</td>
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<td>24</td>
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<tr>
<td>H</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>A</td>
<td>27</td>
<td>39</td>
</tr>
</tbody>
</table>

5.0 BRIEF SCOPE OF WORK:

Oil India Limited (OIL) intends to carry out workstation based interpretation of 3D Vibroseis Seismic Data (56 Fold) of NELP-VII Rajasthan Block: RJ-ONN-2005/2 using latest interpretation systems through tendering process. The quantum of seismic data likely to be available for interpretation is 56 Fold (Full fold) 3D data of 1517 Sq. Km. The service provider is also required to utilize 108 Sq. Kms (Source Surface Area, Nominal Fold:56) of High Resolution (HR) 3D seismic data, if available, for evaluation and identification of prospects in the block. The interpretation of seismic data is to be taken up for evaluation and identification of prospects to generate drillable exploratory locations.

6.0 OBJECTIVE OF THE STUDY:

The objective of 3D Seismic Data Interpretation is identification and evaluation of structural and stratigraphic prospects / leads for exploratory drilling with the help of the present optimally processed 3D seismic data. The bidder should also utilize other available geo-scientific data, reports, well data, well logs etc. in and around the block area for integration of the geoscientific information. The job involves a detailed analysis of the identified prospects / leads for their prospectivity from generation, migration and entrapment of hydrocarbons point of view, estimation of hydrocarbon reserves, resources, risk weighted economic analysis in terms of both NPV and IRR, using state-of-the art technology and identification of locations for exploratory drilling with inter-se priority.
7.0 METHODOLOGY OF THE WORK:

The methodology for interpretation should in general include the following:

a) Review of all relevant available geoscientific data/information, well data, technical reports etc. to place the block in the right geological perspective prior to initiation of the interpretation job.

b) Loading & QC of processed data.

c) Loading & QC of digital well data.

d) Generation of synthetic seismograms of the existing wells in the area and establishment of well to seismic tie.

e) Picking and correlation of a minimum of Six (6) horizons to be decided / identified in consultation with Oil India geoscientists.

f) Correlation of fault cuts to establish fault pattern and generation of fault pattern, generation of two-way time maps incorporating established fault pattern.

g) Conversion of two-way time maps to depth maps.

h) Interval velocity maps within different geological horizons and average velocity maps at mapped levels.

i) Generation of a minimum of five (5) time thickness, isopach maps and description thereof.

j) Depiction of structural configuration of the block area.

k) Seismic attribute analysis both surface and volume in whole block area with emphasis on identified prospects & leads.

l) Preparation of sweetness/porosity maps along the prospective horizons of interest covering the identified prospects & leads.

m) Post Stack Inversion studies and generation of impedance sections across identified prospects & leads.

n) Generation of a minimum of four seismo-geological sections across the block (two along the dip and the other two across). Bidder shall also provide seismo-geological sections across the structures identified, one along structural axis and one across.

o) Identification of Direct Hydrocarbon Indicators (DHI) and delineation of porosity development zones.

p) Seismic sequence Analysis of prospective sequences for seismic facies and areas of porosity development etc. Identification of prospects for hydrocarbon habitat in different geological / stratigraphic sequences in the block.

q) Generation of depth structure maps for all the interpreted horizons and modification thereof with respect to well control if required.
r) Identification of structural and stratigraphic prospects. Fault seal analysis for testing trap integrity of the identified prospects & leads.

s) Evaluation of the prospectivity of the identified prospects/leads from the point of view of generation, migration, play fairway analysis and entrapment.

t) Identification of prospects & leads (structural and stratigraphic) and recommendation of locations for exploratory drilling. For each proposed drillable location, a well prognosis to be given with tentative litho- log.

u) Pore pressure analysis at each of identified prospect to indicate the high pressure zones and determination of depths to tops of the different formations likely to be encountered, at each of the location identified for exploratory drilling.

v) Estimation of hydrocarbon reserves/resources for all identified Prospects/leads in the form of P90, P50 and P10.

r) Risk-weighted economic analysis for all identified Prospects/Leads in terms of both NPV and IRR, using state-of-the-art technology in terms of Production Sharing Contract(PSC) for the block.

s) Prioritization of all identified prospects for exploratory drilling.

w) Submission of detailed draft interpretation report and presentation thereof to OIL at Jodhpur, Rajasthan or Noida, UP.

x) Submission of final interpretation report to OIL at Jodhpur, Rajasthan after incorporating views and comments of OIL.

8.0 **PRE-QUALIFYING CRITERIA:**

8.1 The Vendor must fulfil the following minimum pre-qualifying criteria for empanelment / short-listing for issue of tender documents for hiring of Services for Interpretation of 3D Seismic Data for Evaluation & Identification of Prospects for Exploration Drilling in NELP-VII Block : RJ-ONN- 2005/2, in Jaisalmer District, Rajasthan:

a. The service provider should have an established state-of-the-art interpretation center and have undertaken the said type of interpretation jobs in last five (5) years as on 30.04.2013.

b. The service provider or their principal must have interpretation work experience as under:

i) Completed total of 2000 sq. km 3D seismic data for evaluation and identification of prospects through state-of-the-art interactive interpretation workstations in last five (5) years as on 30.04.2013.

ii) Completed at least 3 projects involving 3D seismic data for interpretation in last five (5) years as on 30.04.2013.

ii) Completed one interpretation project of comprising of minimum 1500 sq Km of 3D Seismic Data during last five (5) years as on 30.04.2013.

Necessary details & documentary evidence to indicate the details of these interpretation experiences are to be given in Annexure-II.

c. The key personnel for interpretation viz. Group Leader should have minimum interpretation work experience of 3D seismic data of 15 years and interpretation Geologist and geophysicist to be a part of the team with 10 years work experience on interactive work stations. The Petrophysicist/Log Analyst and Techno-Economist must have a minimum experience of 5 years on interpretation projects. The other persons required for assisting in the interpretation job like petro physicists/ log
analyst, techno-economic analyst are to be deployed by the service provider as required. **Details of the Minimum work experience required for the key personnel to be deployed are given in Annexure-I.**

d. Average annual financial turn-over as per Audited Annual Reports during the last three (3) years (ending 31.04.2012) shall be at least Rs.199 lakh (USD 0.36 million))

e. The average net profit of the Vendor as per the past three (3) years audited accounts need to be **positive.**

9.0 **INFORMATION & DOCUMENTS:**

9.1 The Vendor must furnish the following in support of fulfilling all the above pre-qualifying criteria:

   a) Details of interpretation workstation Hardware like Type of processor, Number of CPUs/nodes, RAM size, Graphics, hard disk capacity / storage capacity etc.

   b) Details of interpretation software licenses installed, their release date, version and status of maintenance contract etc.

   c) System Layout Diagram including tape drives, plotter and other I/O interface.

   d) Brochures of Software Packages.

   e) Bio-data & Details of experience of key personnel so as to meet pre-qualification as per **Annexure-I.**

   f) Details of work experience and past performance of the firm on interpretation jobs done of similar nature in the past and details of current work in hand and other contractual commitments, indicating areas and clients are to be submitted, in support of the experience criteria laid down above as per **Annexure-II (A & B).**

   g) Location of interpretation center for undertaking the said job.

   h) Financial turn-over of **Vendor** as per **Annexure-III** along with Audited balance sheets / profit and loss accounts etc.

   i) **A letter with categorical confirmation** that the Vendor shall provide key personnel as indicated vide Annexure-I and shall deploy for Interpretation of 3D Seismic Data for Evaluation & Identification of Prospects for Exploration Drilling.

9.2 All documents submitted with the EOI must be self-certified by the Vendor’s authorized person indicating clearly the name & designation of the person.

**Note:**

(i) All the copies of document submitted along with the EOI should be clear & legible.

(ii) OIL INDIA LIMITED (OIL) reserves the right to physically check the original documents/certificate, copies of which are submitted along with the EOI.

(iii) The EOI is liable to be ignored in case of submission of any misleading/false representation by the Vendor in the form, statements and attachments.

(iv) OIL INDIA LIMITED (OIL) reserves the right to ignore any or all EOIs without assigning any reason thereof.

(v) OIL INDIA LIMITED (OIL) reserves the right to curtail/ enhance the scope of the work stated above or cancel, if required, without assigning any reason thereof.
10.0. **SUBMISSION OF EOI:**

The EOI together with the information/documents as mentioned above should be submitted in a closed envelop superscribing “EOI for Workstation based interpretation of 3D Vibroseis Seismic Data (56 Flod) of NELP-VII Rajasthan Block: RJ-ONN-2005/2” and must reach the following address on or before 09.07.2013 (15:00 Hrs, IST).

**CHIEF MANAGER (M&C)**  
**OIL INDIA LIMITED, RAJASTHAN PROJECT**  
**02-A, DISTRICT SHOPPING CENTRE, SARASWATI NAGAR**  
**BASNI, JODHPUR – 342005, RAJASTHAN**  
Fax: 0291-2727050  
Website: www.oilindia.in

If however the above date happens to be a Holiday /Bundh, EOI will be received up to the next full working day till **15:00 Hrs, IST**. EOI may be sent by post/courier service, delivered personally or dropped in the tender box placed at the office of Chief Manager (M&C), Oil India Limited (RP), 2-A, District Shopping Centre, Saraswati Nagar, Basni, Jodhpur-342005, Rajasthan. However, for the delay in receipt or non-receipt of the same, Oil India Ltd. will not be responsible.

12.0 Oil India Limited reserves the right to (a) either accept or reject any / all EOI(s) (b) cancel the process without assigning any reason what so ever.

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### ANNEXURE-I

**LIST OF KEY PERSONNEL TO BE OFFERED BY THE BIDDER**

**Professional Staff for 3D Seismic Data Interpretation**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Position</th>
<th>Minimum Work Experience</th>
<th>No. of Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Group Leader</td>
<td>Minimum <strong>15 years</strong> experience in seismic data interpretation of <strong>3D seismic data</strong> on interactive interpretation work station.</td>
<td>One (1)</td>
</tr>
<tr>
<td>2</td>
<td>Interpretation Geologist &amp; Geophysicist</td>
<td>Minimum <strong>10 years</strong> experience in interpretation of <strong>3D seismic data</strong> on interactive work station with state of art interpretation software packages</td>
<td>Geologist One(1) Geophysicist One(1)</td>
</tr>
<tr>
<td>3</td>
<td>Petrophysicist/Log Analyst</td>
<td>Minimum <strong>5 years</strong> experience in Petrophysical and Log Analysis jobs on interactive work station with state of art interpretation software packages</td>
<td>One(1)</td>
</tr>
<tr>
<td>4</td>
<td>Techno-Economic Analyst</td>
<td>Minimum <strong>5 years</strong> experience in Techno-Economic Analysis of Hydrocarbon Prospects.</td>
<td>One(1)</td>
</tr>
</tbody>
</table>

**Note:**

i. **Bidder must submit detailed Bio-data of all its key personnel to be deployed for the whole period of the project.** Bidder should provide the details viz. Duration of the project, client & clients contact address, area etc. in which the key personnel was associated (A sample bio data as Annexure-IV is enclosed for reference please). Bidder shall deploy the same persons whose Bio-data is offered in the bid for interpretation.

ii. The above list indicates the minimum requirement of Key Personnel and their experience. The Contractor may deploy other personnel if required, in addition to above for timely completion of the work without additional cost what so ever to Company. The interpretation personnel have to be efficient enough to coordinate with Company and perform all other required interaction with external agencies for executing the job successfully. All the key personnel must be fluent in speaking, writing and understanding English language.

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### Annexure –II

Name & Complete Address of Bidder:

(A) Details of 3D Seismic Data Interpretation experience in last five (5) years:

<table>
<thead>
<tr>
<th>Interpretation of minimum 2000 sq. km. 3D seismic data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details of interpretation of 3D seismic data including area, client name, its complete address etc.</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

(B) Details of completion of 3D seismic Interpretation Projects in last five (5) years

<table>
<thead>
<tr>
<th>Interpretation of minimum 3 (three) Projects involving 3D seismic data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Project 1.</td>
</tr>
<tr>
<td>Project 2.</td>
</tr>
<tr>
<td>Project 3...</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

Interested bidder must submit documentary evidence in support of Interpretation of minimum 3 (three) Projects involving 3D Seismic Data from their client clearly mentioning successful completion of the Interpretation Project, volume of area in Sq Km and year of completion.
### Annexure-III

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Annual Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td></td>
</tr>
<tr>
<td>2010-11</td>
<td></td>
</tr>
<tr>
<td>2011-12</td>
<td></td>
</tr>
</tbody>
</table>

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SAMPLE RESUME

**Position as per Tender** : Group Leader

**Name** : John Preiss

**Total Years of Experience** : 20 yrs

**Educational Qualification** : Post Graduate in Geology

**Capabilities** :
- a) Complete knowledge of Seismic Data Interpretation
- b) Conversant with leading Industry Software for Geo Scientific data Interpretation

**Experience Detail** :

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Position</th>
<th>Client Name</th>
<th>Client Contact Details</th>
<th>Project Type (2D / 3D)</th>
<th>Project Area &amp; Volume</th>
<th>Duration (MM/YYYY)</th>
<th>Exp. (in Months)</th>
<th>Job Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Senior Geoscientist</td>
<td>ABCD, USA</td>
<td>Mr A. Abcdefg <a href="mailto:abcdef@tttt.com">abcdef@tttt.com</a></td>
<td>3D</td>
<td>Gulf of Mexico 800 Sq.Km</td>
<td>July, 2013 to Nov, 2013</td>
<td>5</td>
<td>Member of the team for prospect generation / leads by mapping 3D seismic volumes, all with SMT’s 2D-3D Pak and VuPak.</td>
</tr>
<tr>
<td>2</td>
<td>Senior Geoscientist</td>
<td>GKLG, France</td>
<td>Mr Z. <a href="mailto:Pqrsz.pqrs@gklg.com">Pqrsz.pqrs@gklg.com</a></td>
<td>3D</td>
<td>Ghana 500 Sq.Km</td>
<td>July, 2012 to June, 2013</td>
<td>12</td>
<td>Member of the team for prospect generation / leads by mapping 3D seismic volumes, all with SLB’s softwares.</td>
</tr>
</tbody>
</table>

**Work History** :

a) **Senior Geoscientist, TTTT, France, Nov 2008 to Present**

Lead interpreter for **TTTT, France**. Projects in Mauritania, Ghana, Sabah and Sarawak. Used volume interpretation techniques to determine depositional history offshore peninsular Malaysia and Caspian. Mentored junior geoscientists in seismic volume interpretation on Petrel and Paradigm platforms.

b) **Senior Geoscientist, NNNN, Malaysia, Jan. 2007 to Aug. 2008**
Promoted SRGV's advanced seismic interpretation and reservoir characterization products - demonstrating software and training clients. Interpreted seismic data and performed prospect generation on data from Malaysia, Otway Basin Australia, Shetlands, offshore India, and offshore Vietnam. Lectured on seismic volume interpretation.

**Publications**

1995, Case History: Seismic Array Length Comparison in Eastern Desert, SEG Abstracts for Annual Meeting, 1995,

**Language Proficiency**

: English, French

**Personal Details**

Father’s Name  
Thomas Preiss

Date of Birth  
01.06.1963

Residential Address  
House No. 1001, TRY Street, London, UK

Nationality  
English

Passport Number  
T50000234

Date of Issue  
10/10/2012

Date of Expiry  
09/10/2017

Email Id  
John.Preiss@gmail.com