

SECTION - I
Forwarding Letter
Tender No OIL/62/7/ENQ-459

As per enclosed list

1.0 OIL INDIA LIMITED (OIL), is a premier National oil Company, engaged in the business of Exploration, Production and Transportation of Crude Oil and Natural Gas. Oil India Limited is a "Schedule A" company under the Ministry of Petroleum and Natural Gas, Government of India.

2.0 This tender is sought pursuant to the award of onland exploration area, Block "SHAKTHI" Bid Round 2, 2005 Gabon, to a Consortium of Oil India Limited, Indian Oil Corporation and Marvis. Oil India Limited, being the Operator, desires to acquire about 100 Sq.Km of 3D Seismic data.

Oil India Limited intends to acquire the above seismic data engaging a competent international contractor having adequate experience in 3D seismic acquisition with state-of-the-art equipment using Dynamite as the seismic source.

3.0 One complete set of bid document for hiring of above services is being forwarded herewith. You are invited to submit your most competitive bid well within the scheduled bid closing date and time. For your ready reference, few salient points (covered in detail in this Bid Document) are highlighted below:

- | | | |
|--|---|--|
| (i) TENDER NO. | : | OIL/62/7/ENQ-459 dated 04.03.2010. |
| (ii) TYPE OF BID | : | Single Stage Two-Bid 04 (Four) envelope System. |
| (iii) BID CLOSING DATE & TIME | : | 05.04.2010 [at 3.30 PM Gabon time] |
| (iv) TECHNICAL BID OPENING DATE & TIME | : | 05.04.2010 [at 3.45 PM Gabon time] |
| (v) COMMERCIAL BID OPENING DATE & TIME | : | Will be intimated to the eligible bidders nearer the time. |

- (vi) BID SUBMISSION PLACES : Bid should be submitted within the Bid Closing Date and Time at the following address:
General Manager (Gabon Project)
La sabliere, Immueble FIDJI
(Pres la Cours Constitutionelle)
Libreville, BP 23134, Gabon
- (vii) BID OPENING PLACE : Same as above
- (viii) AMOUNT OF PERFORMANCE GUARANTEE : 7.5 % of the contract value.
- (ix) MOBILISATION TIME : 120 days from date of award of contract.
- (x) DURATION OF CONTRACT : 03 months from the date of commencement.
- (xi) QUANTUM OF LIQUIDATED DAMAGE FOR DEFAULT IN TIMELY MOBILIZATION. : ½ % per week upto 7.5 % of total contract value
- (xii) PENALTY FOR DIFFAULT IN TIMELY COMPLETION : @10 % per Sq. KM rate for the remaining quantity of data acquisition carried out beyond stipulated period
- (xiii) BIDS TO BE ADDRESSED TO : General Manager (Gabon Project)
Oil India Limited
La sabliere, Immueble FIDJI
(Pres la Cours Constitutionelle)
Libreville, BP 23134, Gabon

3.0 OIL now look forward to your active participation in the tender.

Thanking you,

Yours faithfully,
OIL INDIA LIMITED

(G. C. Dev Choudhury
Chief Manager (Materials)
for Chairman & Managing Director

cc : Mr. Suresh Sharma
30, South Park Apartments,
Kalkaji,
NEW DELHI-110 019

Tel.: +91 (0) 11 4059 0084

SECTION - II **INSTRUCTIONS TO BIDDERS**

1.0 Bidder shall bear all costs associated with the preparation and submission of bid. Oil India Limited, hereinafter referred to as Company, will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

A. BIDDING DOCUMENTS

2.0 The services required, bidding procedures and contract terms are prescribed in the Bidding Documents. This bidding document includes the following:

- (a) A forwarding letter highlighting the following points (Section I):
 - (i) Company's Tender No.
 - (ii) Bid closing date and time.
 - (iii) Bid opening date, time and place.
 - (iv) Bid submission place.
 - (v) Bid opening place.
 - (vi) The amount of performance guarantee.
 - (vii) Quantum of liquidated damages for default in timely mobilisation.
 - (viii) Duration of the Contract
- (b) Instruction to Bidders (Section II)
- (c) General Conditions of Contract (Section III)
- (d) Terms of Reference/Technical specifications (Section IV)
- (e) Schedule of Rates / Price Bid Format (Section V)
- (f) Special Conditions of Contract (Section VI)
- (g) Bid Rejection Criteria (BRC)/Bid Evaluation Criteria (BEC)-(Section-VII)
- (h) Proforma Letter of Authority (Proforma-I)
- (i) Statement of Compliance with respect to BRC (Proforma-II).
- (j) Statement of non-compliance (excepting BRC) (Proforma-IIa)
- (k) Bid Form (Proforma-IIA).
- (l) The Performance Security Form (Proforma-IIB).
- (m) The Contract Form (Proforma-IIC).
- (n) The Bid Security Form (Proforma-IID).

2.1 The bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required in the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk & responsibility and may result in the rejection of its bid.

3.0 AMENDMENT OF BIDDING DOCUMENTS:

3.1 At any time prior to the deadline for submission of bids, the company 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 the issuance of an Addendum.

3.2 The Addendum will be sent in writing by Fax or e-Mail to all prospective Bidders to whom Company has sent the bid documents. The company may, at its discretion, extend the deadline for bid submission, if the Bidders are expected to require additional time in which to take the Addendum into account in preparation of their bid or for any other reason.

B. PREPARATION OF BIDS:

4.0 **LANGUAGE OF BIDS:** The bid as well as all correspondence and documents relating to the bid exchanged between the Bidder and the company shall be in English language, except that any printed literature may be in another language provided it is accompanied by an English translated version, which shall govern for the purpose of bid interpretation.

5.0 **DOCUMENTS COMPRISING THE BID:**

5.1 The bid submitted by the Bidder shall comprise of the following components under 04(Four) envelopes system:

- (A) Envelope-A/B : Containing Statement of Compliance with respect to BRC (Proforma-II).
- (C) Envelope-C : Containing **TECHNICAL** Bid comprising of following:
 - (i) Complete technical details of the services and equipment specifications with catalogue, etc.
 - (ii) Documentary evidence established in accordance with clause 9.0.
 - (iii) Statement of non-compliance (excepting BRC) (Proforma-IIa).
 - (iv) Copy of commercial bid ***without indicating prices.***
- (D) Envelope-D : Containing Commercial / Priced Bid comprising of following:
 - i. Bid Form as per Proforma-IIA.
 - ii. Price-Bid Format as per SECTION-V.

The Commercial / Priced Bid shall contain the prices along with the currency quoted and any other commercial information pertaining to the service offered.

(ii)

6.0 **BID FORM:** The bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the Bid Document.

7.0 **BID PRICE:**

7.1 Unit prices must be quoted by the bidders both in words and in figures.

7.2 Price quoted by the successful bidder must remain firm during its performance of the Contract and will not be subject to variation on any account.

7.3 All duties and taxes including Corporate Income Taxes and other levies payable by the successful bidder under the Contract for which this Bidding Document is being issued, shall be included in the rates, prices and total Bid Price submitted by the bidder, and the evaluation and comparison of bids shall be made accordingly. For example, personal taxes and/or any corporate taxes arising out of the profits on the contract as per rules of the country shall be borne by the bidder.

- 8.0 **CURRENCIES OF BID AND PAYMENT:** A bidder expecting to incur its expenditure in the performance of the Contract in more than one currency, and wishing to be paid accordingly, shall so indicate in the bid. In such a case, the bid shall be expressed in different currencies and the respective amounts in each currency shall together make up the total price.
- 9.0 **DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS:** These are listed in Section VII.
- 10.0 **BID SECURITY:THIS CLAUSE IS NOT APPLICABLE AGAINST THIS TENDER**
- 10.1 All the Bids must be accompanied by Bid Security for the amount as mentioned in the NIT or an equivalent amount in freely convertible currency and shall be in the prescribed format (Proforma-ID) as Bank Guarantee((BG) or an irrevocable Letter of Credit (L/C) from any of the following Banks :
- a) Any Scheduled Indian Bank or
 - b) Any Indian branch of a foreign Bank or
 - c) Any reputed foreign Bank having correspondent bank in India
- 10.2 The Bank Guarantee / LC shall be valid for seven (7) months from the Bid closing date and shall be enforceable at Duliajan / Delhi / Kolkata / Guwahati.
- 10.3 (i) The foreign Bidder will have to submit the Bank Guarantee from Banks of Indian origin situated in their town/city/country. In case no such bank of Indian origin is situated in their town/city/country, the Bank Guarantee may be submitted from the bankers as specified in Clause 10.1.(b) or (c) above.
- (ii) The Bank Guarantee issued by a Bank amongst others must contain the following particulars of such Bank:
- (a) Full Address
 - (b) Branch Code
 - (c) Code Nos. of the authorized signatory with full name and designation
 - (d) Phone Nos./Fax Nos./E-mail address
- (iii) In case, any such Bid Security in the form of a Bank Guarantee is found to be not genuine or issued by a fake banker or issued under the signatures of fake official of the Bank, the bid submitted by the concerned bidder shall be rejected forthwith and the bidder shall be debarred from participating in future tenders.
- 10.4 Any bid not accompanied by a proper Bid Security (in Original) in conformity with Clauses 10.1, 10.2 and 10.3 as applicable will be rejected outright without any further reference.

- 10.5 The Bid Security of the unsuccessful bidders will be returned after finalization of tender whereas the Bid Security of the successful bidder will be discharged on such bidder's furnishing the Performance Security to OIL in the prescribed format (Proforma-IB) against the contract secured by the bidder within the stipulated time frame. The successful bidder will however, ensure that the validity of the Bid Security till such time the Performance Security in conformity with Clause 27.0 below as the case may be, is furnished.
- 10.6 The bidders will extend the validity of the Bid Security, if and whenever specifically advised by OIL, at the bidder's cost.
- 10.7 Bid Security will not accrue any interest during its period of validity or extended validity.
- 10.8 The Bid Security will be forfeited:
- a) If a bidder withdraws his bid during the period of validity of bid or any extension thereof duly agreed by the bidder,
 - OR
 - b) If the successful Bidder do not accept the order or fails to furnish the Performance Security within 30 days of placement of order or before the expiry of Bid Security (unless extended), whichever is earlier.

11.0 **PERIOD OF VALIDITY OF BIDS:**

- 11.1 Bids shall remain valid for 180 days after the date of bid opening prescribed by the Company.
- 11.2 In exceptional circumstances, the Company may solicit the Bidder's consent to an extension of the period of validity. The request and the response thereto shall be made in writing (or by Fax).

12.0 **FORMAT AND SIGNING OF BID:**

- 12.1 The Bidder shall prepare four copies of the bid clearly marking "ORIGINAL BID" and rest "COPY OF BID". In the event of any discrepancy between them, the original shall govern.
- 12.2 The original and all copies of the bid shall be typed or written in indelible inks and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. The letter of authorization (as per Proforma II) shall be indicated by written power of attorney accompanying the bid. All pages of the bid, except for un-amended printed literature, shall be initialled by the person or persons signing the bid.
- 12.3 The bid should contain no interlineations, white fluid erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such correction shall be initialled by the person or persons signing the bid.

13. SUBMISSION OF BIDS:

13.1 The tender is being processed according to a single stage - Two bid – **4(Four) Envelope** system. Offers should be submitted in **4(four) separate envelopes (marked 'A', 'B', 'C' & 'D') containing Bid Security(not applicable against this Tender), Statement of Compliance, Technical bid and Commercial bid respectively in each envelope and** in quadruplicate (one Original and 3 copies). **The original bid shall be in bidder's own original letterhead duly signed by authorised signatory.**

13.2 The Bidder shall seal the original and each copy of the bid duly marking as "ORIGINAL" and "COPY".

13.3 The **Envelope 'A'/'B'** containing the 'Certificate of Compliance' (Original + 3 copies) **as per Proforma-II** should be in one sealed cover superscribing the following on the right hand top corner :

- (i) Envelope No. **'A'/'B' : Bid Security/ Statement of Compliance**
- (ii) Tender No. _____
- (iii) Bid Closing Date _____
- (iv) Bidder's Name _____

13.4 The **Envelope 'C'** containing the 'Technical Bid' (Original + 3 copies) only should be in one sealed cover superscribing the following on the right hand top corner :

- (i) Envelope No. **'C' :Technical bid**
- (ii) Tender No. _____
- (iii) Bid Closing Date _____
- (iv) Bidder's Name _____

In this envelope, the bid containing all parts except the priced bid shall be put in. However, a copy of the Priced Bid with price figures blanked out is to be enclosed in this envelope.

13.5 The **Envelope 'D'** containing the 'Priced Bid' (Original + 3 copies) should be in a separate sealed cover superscribing the following on the right hand top corner.

- (i) Envelope No. **'D' Commercial / Priced Bid**
- (ii) Tender No. _____
- (iii) Bid Closing Date _____
- (iv) Bidder's Name _____

13.6 The above mentioned **4(four)** separate covers containing **Bid Security, Certificate of Compliance**, Technical and the Commercial bids should then be put together in another envelope superscribing the following details on the top and the envelope should be addressed to the person(s) as mentioned in the "**Forwarding Letter**".

- (i) Tender No. _____
- (ii) Bid Closing Date _____
- (iii) Bidder's Name _____

13.7 The offer should contain complete specifications, details of services and equipment/accessories offered together with other relevant literature/ catalogues of the equipment offered. The Bid Security mentioned in clause 10.0 should be **put in**

Envelope 'A' as mentioned in Clause No. 13.3 above. The Price Schedule should not be put in the envelopes containing the Bid Security or Certificate of Compliance or Technical Bid.

13.8 All the conditions of the contract to be made with the successful bidder are given in various Sections of this document. Bidders are requested to state their non-compliance to each clause as per **Proforma-IIa**. This should be enclosed with the technical bid.

13.9 Timely delivery of the bids is the responsibility of the Bidder. Bidders should send their bids as far as possible by Registered Post or by Courier Services. **Bids may also be handed over to the Officer in Charge of receiving the bids before the bid closing date and time.** Company shall not be responsible for any postal delay/transit loss.

13.10 E-mail/ Fax/ Telex/Telegraphic/Telephonic offers will not be accepted.

14.0 INDIAN AGENTS :THIS CLAUSE IS NOT APPLICABLE AGAINST THIS TENDER

14.1 Bidders are requested to clearly indicate in their quotation whether they have an agent in India. If so, the bidders should furnish the name and address of their agents and state clearly whether these agents are authorised to receive any commission. The rate of the commission should be indicated which will be payable in non-convertible Indian currency according to Import Trade Regulation of India. Unless otherwise specified, it will be assumed that an agency commission is not involved in the particular bid. Further, Bidders are requested to quote directly and not through their agents in India. To discuss

15.0 **DEADLINE FOR SUBMISSION OF BIDS:** Bids must be received by the company at the address specified in the "Forwarding Letter" not later than 1530 Hrs. (Gabon Standard Time) on the bid closing date mentioned in the "Forwarding Letter".

16.0 **LATE BIDS:** Any Bid received by the Company after the deadline for submission of bids prescribed by the Company shall be rejected.

17.0 MODIFICATION AND WITHDRAWAL OF BIDS:

17.1 The Bidder after submission of bid may modify or withdraw its bid by written notice prior to bid closing .To discuss

17.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of para 13.0. A withdrawal notice may also be sent by fax but followed by a signed confirmation copy, postmarked not later than the deadline for submission of bids. To discuss

17.3 No bid can be modified subsequent to the deadline for submission of bids.

17.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval shall result in the Bidder's forfeiture of its Bid Security.

18.0 BID OPENING AND EVALUATION:

- 18.1 Company will open the Bids, including submission made pursuant to clause 17.0, in the presence of Bidder's representatives who choose to attend at the date, time and place mentioned in the Forwarding Letter. However, an authorization letter (as per **Proforma-I**) from the bidder must be produced by the Bidder's representative at the time of bid opening. Unless this Letter is presented, the representative will not be allowed to attend the bid opening. The Bidder's representatives who are allowed to attend the bid opening shall sign a register evidencing their attendance. Only one representative against each bid will be allowed to attend.
- 18.2 Bid for which an acceptable notice of withdrawal has been received pursuant to clause 17.0 shall not be opened. Company will examine bids to determine whether they are complete, whether requisite Bid Securities have been furnished, whether documents have been properly signed and whether the bids are generally in order.
- 18.3 Bid opening shall be done in the following manner :
- i) **Envelope 'A'/'B' containing the "Statement of Compliance in respect of BRC of the tender as per Proforma-II" shall be opened. In case of non-conformity and if the 'Statement of Compliance' as per Proforma-II is not furnished in Envelope 'B', the remaining two envelopes shall not be considered for opening and the unopened two envelopes shall be returned to the party.**
 - ii) **Envelope 'C' containing the 'Technical Bid' shall be opened only after the Bid Security and the 'Statement of Compliance' are found to be in order after opening the Envelope 'A' and Envelope 'B' .**
 - iii) **Envelope 'D' containing the 'Priced Bid' shall be opened of only those bidders at a later date with prior intimation to them whose bids are found technically acceptable and Bid Security and the 'Certificate of Compliance' are found to be in order.**
- 18.4 Company shall prepare, for its own records, minutes of bid opening including the information disclosed to those present in accordance with the sub-clause 18.3.
- 18.5 To assist in the examination, evaluation and comparison of bids the Company may at its discretion, ask the Bidder for clarifications of its bid. The request for clarification and the response shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.
- 18.6 Prior to the detailed evaluation, Company will determine the substantial responsiveness of each bid to the requirement of the Bidding Documents. For purpose of these paragraphs, a substantially responsive bid is one, which conforms to all the terms and conditions of the Bidding Document without material deviations or reservation. A material deviation or reservation is one

which affects in any way substantial way the scope, quality, or performance of work, or which limits in any substantial way, in-consistent way with the bidding documents, the Company's right or the bidder's obligations under the contract, and the rectification of which deviation or reservation would affect unfairly the competitive position of other bidders presenting substantial responsive bids. The Company's determination of bid's responsiveness is to be based on the contents of the Bid itself without recourse to extrinsic evidence.

18.7 A Bid determined as not substantially responsive will be rejected by the Company and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

18.8 The Company may waive minor informality or nonconformity or irregularity in a bid, which does not constitute a material deviation, provided such waiver, does not prejudice or affect the relative ranking of any Bidder.

19.0 OPENING OF COMMERCIAL/PRICE BIDS

19.1 Company will open the Commercial Bids of the technically qualified Bidders on a specific date in presence of interested qualified bidders. Technically qualified Bidders will be intimated about the bid opening date in advance.

19.2 The Company will examine the Price quoted by Bidders to determine whether they are complete, any computational errors have been made, the documents have been properly signed, and the bids are generally in order.

19.3 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 accordingly. If any Bidder does not accept the correction of the errors, their bid will be rejected. If there is a discrepancy between words, and figures, the amount in words will prevail.

20.0 CONVERSION TO SINGLE CURRENCY:

20.1 While evaluating the bids, the closing rate of exchange declared by State Bank of India on the day prior to price bid opening will be taken into account for conversion of foreign currency into Indian Rupees. Where the time lag between the opening of the price bids and final decision exceeds three months, the rate of exchange declared by State Bank of India on the date prior to the date of final decision will be adopted for conversion.

21.0 **EVALUATION AND COMPARISON OF BIDS:** The Company will evaluate and compare the bids as per Section-VII of the bidding documents.

22.0 CONTACTING THE COMPANY :

22.1 Except as otherwise provided in para 18.0 above, no Bidder shall contact Company on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded except as required by Company vide para 18.5.

22.2 An effort by a Bidder to influence the Company in the Company's bid evaluation, bid comparison or Contract award decisions may result in the rejection of their bid.

D. AWARD OF CONTRACT:

23.0 **AWARD CRITERIA:** The Company will award the Contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

24.0 **COMPANY'S RIGHT TO ACCEPT OR REJECT ANY BID:** Company reserves the right to accept or reject any or all bids 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 affected bidder, or bidders or any obligation to inform the affected bidder of the grounds for Company's action.

25.0 **NOTIFICATION OF AWARD:**

25.1 Prior to the expiry of the period of bid validity or extended validity ,the company will notify the successful Bidder in writing by registered letter or by cable or telex or fax (to be confirmed in writing by registered / couriered letter) that its bid has been accepted.

25.2 The notification of award will constitute the formation of the Contract.

25.3 Upon the successful Bidder's furnishing of Performance Security pursuant to para 27.0 the company will promptly notify each un-successful Bidder and will discharge their Bid Security, pursuant to para 10.0 hereinabove.

26.0 **SIGNING OF CONTRACT:**

26.1 At the same time as the Company notifies the successful Bidder that its Bid has been accepted, the Company will either call the successful bidder for signing of the agreement or send the Contract Form provided in the Bidding Documents, along with the General & Special Conditions of Contract, Technical Specifications, Schedule of rates incorporating all agreements between the parties. To discuss

26.2 Within 30 days of receipt of the final contract document, the successful Bidder shall sign and date the contract and return it to the company.

27.0 **PERFORMANCE SECURITY:**

27.1 The successful contractor shall furnish the Performance Security in the form enclosed (Proforma IIB) herewith within 30 days of the receipt of notification of Award of Contract failing which OIL reserves the right to cancel the contract and forfeit the Bid Security. **Bidders should undertake in his bid to submit Performance Security as stated above.**

27.2 In the event of contractor's failure to discharge their obligations under the Contract, the Performance Security shall be encashed and the proceeds thereof shall be forfeited without any further reference to the contractor.

- 27.3 The Performance Security shall be denominated in the currency of the contract or in equivalent US Dollars converted at the B.C. Selling rate of State Bank of India on the contract date shall be in the form of a Bank Guarantee or irrevocable Letter of Credit from :
- a) Any Scheduled Indian Bank or
 - b) Any Indian branch of a foreign Bank or
 - c) Any reputed foreign Bank having correspondent bank in India.
- 27.4 (i) The contractor will have to submit the bank guarantee from Banks of Indian origin situated in their town/city/country. In case no such bank of Indian origin is situated in their town/city/country, the Bank Guarantee may be submitted from the bankers as specified in Clause 27.3(b) or (c) above.
Performance B G
- (ii) The Performance Bank Guarantee issued by a Bank amongst others must contain the following particulars of such Bank :
- (a) Full Address
 - (b) Branch Code
 - (c) Code Nos. of the authorized signatory with full name and designation
 - (d) Phone Nos./Fax Nos./E-mail address
- (iii) In case, the Performance Security in the form of a Bank Guarantee is found to be not genuine or issued by a fake banker or issued under the signatures of fake official of the Bank, the LOA/Contract issued/placed on the contractor shall be treated as cancelled forthwith and the contractor shall be debarred from participating in future tenders. Further, the Bid Security submitted by such contractor shall be invoked without any further reference.
- 27.5 The Bank Guarantee / LC shall be enforceable at Duliajan / Delhi / Kolkata / Guwahati/Libreville.
- 27.6 The amount of Performance Security shall be 7.5% of contract value (unless specified otherwise).
- 27.7 The Performance Security will be discharged by OIL and returned to the contractor, within 30 days of its expiry of validity including any extension sought thereof or on completion of obligations under the contract.
- 27.8 Performance Security amount will not accrue any interest.
- 27.9 The Performance security specified above must be valid for 03 months (plus 3 months to lodge claim, if any) after the date of expiry of the tenure of the contract to cover the warranty obligations. The same will be discharged by company not later than 30 days following its expiry.

28.0 **LIQUIDATED DAMAGES FOR DEFAULT IN TIMELY MOBILISATION:** In the event of the Contractor's default in timely mobilisation for commencement of operations within the stipulated period, the Contractor shall be liable to pay liquidated damages at the rate of 1/2% of the total contract value per week or part thereof of delay subject to maximum of 7.5%. Liquidated Damages will be reckoned from the date after expiry of the scheduled mobilisation period till the date of commencement of contract as defined in clause no. 2.0 of Section - III. The Company also reserves the right to cancel the Contract without any compensation whatsoever in case of failure to mobilise and commence operation within the stipulated period.

29.0 **CREDIT FACILITY:** Bidders should indicate clearly in the bid about availability of any credit facility inclusive of Government to Government credits indicating the applicable terms and conditions of such credit.

30.0 **MOBILISATION ADVANCE PAYMENT:**

30.1 Request for advance payment shall not be normally considered. However, depending on the merit and at the discretion of the company, advance against mobilisation charge may be given at an interest rate of 1% above the prevailing Bank rate (CC rate) of SBI from the date of payment of the advance till recovery/ refund.

30.2 Advance payment agreed to by the company shall be paid only against submission of an acceptable bank guarantee whose value should be equivalent to the amount of advance plus the amount of interest covering the period of advance.

30.3 Bank guarantee shall be valid for 2 months beyond completion of mobilisation and the same may be invoked in the event of Contractor's failure to mobilise as per agreement.

30.4 In the event of any extension to the mobilisation period, Contractor shall have to enhance the value of the bank guarantee to cover the interest for the extended period and also to extend the validity of bank guarantee accordingly.

SECTION III
GENERAL CONDITIONS OF CONTRACT

1.0 **DEFINITIONS:**

1.1 In the contract, the following terms shall be interpreted as indicated:

- (a) "Contract" means agreement entered into between Company and contractor, as recorded in the contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein;
- (b) "Contract Price" means the price payable to contractor under the contract for the full and proper performance of its contractual obligations;
- (c) "Work" means each and every activity required for the successful performance of the services described in Section IV, the Terms of Reference;
- (d) "Company" means Oil India Limited (OIL);
- (e) "Contractor" means the individual or firm or Body incorporate performing the work under this Contract;
- (f) "Contractor's Personnel" means the personnel to be provided by the contractor to provide services as per the contract;
- (g) "Company's Personnel" means the personnel to be provided by OIL or OIL's contractor (other than the Contractor executing this Contract). The company representatives of OIL are also included in the Company's personnel.

2.0 **EFFECTIVE DATE, MOBILISATION TIME, DATE OF COMMENCEMENT OF THE CONTRACT AND DURATION OF CONTRACT:**

2.1 The contract shall become effective as of the date company notifies contractor in writing that it has been awarded the contract. Such date of notification of award of Contract will be the Effective Date of Contract

2.2 The mobilisation of equipment, personnel etc. should be completed by Contractor **within a maximum period of 120 days (appears high) from the date of issue of Letter of Award (LOA)**. Mobilisation shall be deemed to be completed when Contractor's equipment and manpower are placed at the nominated location in readiness to commence the Work as envisaged under the contract.

2.3 The date on which the mobilisation is completed in all respects is treated as date of commencement of contract. The duration of the contract to be reckoned from the commencement date shall be for a period as detailed in clause 7.0 of Section IV.

3.0 **GENERAL OBLIGATIONS OF CONTRACTOR:** Contractor shall, in accordance with and subject to the terms and conditions of this Contract:

3.1 Perform the work described in the Terms of Reference (Section IV) in most economic and cost effective way.

3.2 Except as otherwise provided in the Terms of Reference and the special Conditions of the contract, provide all labour as required to perform the work.

3.3 Perform all other obligations, work and services which are required by the terms of this contract or which reasonably can be implied from such terms as being necessary for the successful and timely completion of the work.

3.4 Contractor shall be deemed to have satisfied himself before submitting their bid as to the correctness and sufficiency of its bid for the services required and of the rates and prices quoted, which rates and prices shall, except insofar as otherwise provided, cover all its obligations under the contract.

3.5 Contractor shall give or provide all necessary supervision during the performance of the services and as long thereafter as company may consider necessary for the proper fulfilling of contractor's obligations under the contract.

4.0 **GENERAL OBLIGATIONS OF THE COMPANY:** Company shall, in accordance with and subject to the terms and conditions of this contract:

4.1 Pay Contractor in accordance with terms and conditions of the contract.

4.2 Allow Contractor access, subject to normal security and safety procedures, to all areas as required for orderly performance of the work.

4.3 Perform all other obligations required of Company by the terms of this contract.

5.0 **PERSONNEL TO BE DEPLOYED BY THE CONTRACTOR:**

5.1 Contractor warrants that it shall provide competent, qualified and sufficiently experienced personnel to perform the work correctly and efficiently.

5.2 The Contractor should ensure that their personnel observe applicable company and statutory safety requirement. Upon Company's written request, contractor, entirely at its own expense, shall remove immediately; any personnel of the Contractor determined by the Company to be unsuitable and shall promptly replace such personnel with personnel acceptable to the Company.

5.3 The Contractor shall be solely responsible throughout the period of the contract for providing all requirements of their personnel including but not limited to, their transportation to & fro from field site, enroute/local boarding, lodging & medical attention etc. Company shall have no responsibility or liability in this regard.

5.4 Contractor's key personnel shall be fluent in English language (both writing and speaking).

6.0 **WARRANTY AND REMEDY OF DEFECTS:**

6.1 Contractor warrants that it shall perform the work in a professional manner and in accordance with the highest degree of quality, efficiency, and with the state of the art technology/inspection services and in conformity with all specifications, standards and drawings set forth or referred to in the Technical Specifications. They should comply with the instructions and guidance which Company may give to the Contractor from time to time.

6.2 Should Company discover at any time during the execution of the Contract or within 03(Three) months after completion of the operations that the work carried out by the contractor does not conform to the foregoing warranty, Contractor shall after receipt of notice from Company, promptly perform all corrective work required to make the services conform to the Warranty. Such corrective work shall be performed entirely at contractor's own expenses. If such corrective work is not performed within a reasonable time, the Company, at its option, may have such remedial work carried out by others and charge the cost thereof to Contractor which the contractor must pay promptly. In case contractor fails to perform remedial work, the performance security shall be forfeited.

7.0 **CONFIDENTIALITY, USE OF CONTRACT DOCUMENTS AND INFORMATION**

7.1 Contractor shall not, without Company's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing pattern, sample or information furnished by or on behalf of Company in connection therewith, to any person other than a person employed by Contractor in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

7.2 Contractor shall not, without Company's prior written consent, make use of any document or information except for purposes of performing the contract.

7.3 Any document supplied to the Contractor in relation to the contract other than the Contract itself remain the property of Company and shall be returned (in all copies) to Company on completion of Contractor's performance under the Contract if so required by Company.

8.0 **TAXES :**

8.1 Tax levied as per the provisions of Laws of Gabon and any other enactment/rules on income derived/ payments received under the contract will be on contractor's account.

8.2 Contractor shall be responsible for payment of personal taxes, if any, for all the personnel deployed.

9.0 **INSURANCE:**

9.1 The contractor shall arrange insurance to cover all risks in respect of their personnel, materials and equipment belonging to the contractor or its subcontractor during the currency of the contract.

9.2 Contractor shall at all time during the currency of the contract provide, pay for and maintain the insurances as needed.

10.0 **CHANGES:**

10.1 During the performance of the work, Company may make a change in the work within the general scope of this Contract including, but not limited to, changes in methodology, and minor additions to or deletions from the work to be performed. Contractor shall perform the work as changed. Changes of this nature will be affected by written order by the Company.

10.2 If any change result in an increase in compensation due to Contractor or in a credit due to Company, Contractor shall submit to Company an estimate of the amount of such compensation or credit in a form prescribed by Company. Such estimates shall be based on the rates shown in the Schedule of Rates (**Section V**). Upon review of Contractor's estimate, Company shall establish and set forth in the Change Order the amount of the compensation or credit for the change or a basis for determining a reasonable compensation or credit for the change. If Contractor disagrees with compensation or credit set forth in the Change Order, Contractor shall nevertheless perform the work as changed, and the parties will resolve the dispute in accordance with Clause 13.0 hereunder. Contractor's performance of the work as changed will not prejudice Contractor's request for additional compensation for work performed under the Change Order.

11.0 **FORCE MAJEURE:**

11.1 In the event of either party being rendered unable by 'Force Majeure' to perform any obligation required to be performed by them under the contract, the relative obligation of the party affected by such 'Force Majeure' will stand suspended as provided herein. The word 'Force Majeure' as employed herein shall mean acts of God, war, revolt, agitation, strikes, riot, fire, flood, sabotage, civil commotion, road barricade (but not due to interference of employment problem of the Contractor) and any other cause, whether of kind herein enumerated or otherwise which are not within the control of the party to the contract and which renders performance of the contract by the said party impossible.

11.2 Upon occurrence of such cause and upon its termination, the party alleging that it has been rendered unable as aforesaid thereby, shall notify the other party in writing within Seventy Two (72) hours of the alleged beginning and ending thereof, giving full particulars and satisfactory evidence in support of its claim.

11.3 Should 'Force Majeure' condition as stated above occur and should the same be notified within seventy-two (72) hours after its occurrence then Force Majeure rate shall apply for the first ten days. Either party will have the right to terminate the contract if such 'Force Majeure' condition, continue beyond ten (10) days with prior written notice. Should either party decide not to terminate the contract even under such condition, no payment would apply after expiry of ten (10) days period unless otherwise agreed to. Time for performance of the relative obligation suspended by the 'Force Majeure' shall then stand extended by the period for which such cause lasts.

12.0 **TERMINATION:**

12.1 TERMINATION ON EXPIRY OF THE TERMS (DURATION) - The contract shall be deemed to have been automatically terminated on completion of acquisition of 100 Sq. KM Of 3D seismic data using Dynamite as source or, expiry of duration of the Contract or extension, if any, there of, whichever is earlier.

12.2 TERMINATION ON ACCOUNT OF FORCE MAJEURE - Either party shall have the right to terminate the Contract on account of Force Majeure as set forth in para 11.0 above.

12.3 TERMINATION ON ACCOUNT OF INSOLVENCY - In the event that the Contractor at any time during the term of the Contract, becomes insolvent or makes a voluntary assignment of its assets for the benefit of creditors or is adjudged bankrupt, then the Company shall, by a notice in writing have the right to terminate the Contract and all the Contractor's rights and privileges hereunder, shall stand terminated forthwith.

12.4 TERMINATION FOR UNSATISFACTORY PERFORMANCE - If the Company considers that, the performance of the Contractor is unsatisfactory, or not upto the expected standard, the Company shall notify the Contractor in writing and specify in details the cause of the dissatisfaction. The Company shall have the option to terminate the Contract by giving 15 days notice in writing to the Contractor, if Contractor fails to comply with the requisitions contained in the said written notice issued by the Company,

12.5 TERMINATION DUE TO CHANGE OF OWNERSHIP & ASSIGNMENT - In case the Contractor's rights and / or obligations under the Contract and/or the Contractor's rights, title and interest to the equipment/material, are transferred or assigned without the Company's consent, the Company may at its absolute discretion, terminate the Contract.

12.6 If at any time during the term of the Contract, breakdown of Contractor's equipment results in Contractor being unable to perform their obligations hereunder for a period of 15 successive days, Company at its option may terminate this Contract in its entirety without any further right or obligation on the part of the Company except for the payment of money then due. No notice shall be served by the Company under the condition stated above.

12.7 Notwithstanding any provisions herein to the contrary, the Contract may be terminated at any time by the company on giving 15 (fifteen) days written notice to the Contractor due to any other reason not covered under the above clause from 12.1 to 12.6 and in the event of such termination the Company shall not be liable to pay any cost or damage to the Contractor except for payment for services as per the Contract upto the date of termination.

12.8 CONSEQUENCES OF TERMINATION - In all cases of termination herein set forth, the obligation of the Company to pay for Services as per the Contract shall be limited to the period upto the date of termination. Notwithstanding the termination of the Contract, the parties shall continue to be bound by the provisions of the Contract that reasonably require some action or forbearance after such termination.

12.9 Upon termination of the Contract, Contractor shall return to Company all of Company's items, which are at the time in Contractor's possession.

12.10 In the event of termination of contract, Company will issue Notice of termination of the contract with date or event after which the contract will be terminated. The contract shall then stand terminated and the Contractor shall demobilize their personnel & materials.

12.11 Demobilisation charges in the event of termination under clause 12.3, 12.4, 12.5 and 12.6 will not be payable. Further, demobilisation charges will not also be payable under clause 12.7 if termination is due to contractor's default.

13.0 **SETTLEMENT OF DISPUTES AND ARBITRATION:**

13.1 The Parties shall make every effort to settle amicably any dispute arising under this Agreement.

13.2 **Arbitration:**

Any controversy or claim arising out of or relating to this Agreement, or breach thereof, shall be finally settled by Arbitration, in accordance with the Rules of Arbitration of the International Chamber of Commerce, in Paris, France, in Arabic or English as the Parties may agree, by 03 (Three) Arbitrators. Each Party shall appoint one Arbitrator, and the International Chamber of Commerce shall appoint the third Arbitrator who must be in no way related to either Party and who will be the Chairman of the Arbitration Body.

14.0 **NOTICES:**

14.1 Any notice given by one party to other, pursuant to this Contract shall be sent in writing or by telex or Fax and confirmed in writing to the applicable address specified below:

Company

Contractor

General Manager (Gabon Project)
Oil India Limited
La sabliere, Immueble FIDJI
(Pres la Cours Constitutionelle)
Libreville, BP 23134, Gabon

14.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

15.0 **SUBCONTRACTING:** Contractor shall not subcontract or assign, in whole or in part, its obligations to perform under this contract, except with Company's prior written consent.

16.0 **MISCELLANEOUS PROVISIONS :**

16.1 Contractor shall give notices and pay all fees at their own cost required to be given or paid by any National or State Statute, Ordinance, or other Law or any regulation, or bye-law of any local or other duly constituted authority as may be in force from time to time in Gabon, in relation to the performance of the services and by the rules & regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the services.

16.2 Contractor shall conform in all respects with the provisions of any Statute, Ordinance of Law as aforesaid and the regulations or bye-law of any local or other duly constituted authority which may be applicable to the services and with such rules and regulation, public bodies and Companies as aforesaid and shall keep Company indemnified against all penalties and liability of every kind for breach of any such Statute, Ordinance or Law, regulation or bye-law.

16.3 During the tenure of the Contract, Contractor shall keep the site where the services are being performed reasonably free from all unnecessary obstruction and shall store or dispose of any equipment and surplus materials and clear away and remove from the site any wreckage, rubbish or temporary works no longer required. On the completion of the services, Contractor shall clear away and remove from the site any surplus materials, rubbish or temporary works of every kind and leave the whole of the site clean and in workmanlike condition to the satisfaction of the Company.

16.4 Key personnel cannot be changed during the tenure of the Contract except due to sickness/death/resignation of the personnel in which case the replaced person should have equal experience and qualification which will be again subject to approval by the Company.

17.0 LIQUIDATED DAMAGES FOR DEFAULT IN TIMELY MOBILISATION:

17.1 In the event of the Contractor's default in timely mobilisation for commencement of operations within the stipulated period, the Contractor shall be liable to pay liquidated damages at the rate of 1/2% of the total contract value per week or part thereof of delay subject to maximum of 7.5%. Liquidated Damages will be reckoned from the date after expiry of the scheduled mobilisation period till the date of commencement of contract as defined in clause no. 2.0 of Section - III.

17.2 The Company also reserves the right to cancel the Contract without any compensation whatsoever in case of failure to mobilise and commence operation within the stipulated period.

18.0 **PERFORMANCE SECURITY:** The Contractor shall furnish to Company a Performance Security for an amount equivalent to 7.5% of estimated Contract Price as detailed in Para 27 of Section II, INSTRUCTION TO BIDDERS . The performance security shall be payable to Company as compensation for any loss resulting from Contractor's failure to fulfill their obligations under the Contract. In the event of extension of the Contract period, the validity of the bank guarantee shall be suitably extended by the Contractor. The bank guarantee will be discharged by Company not later than 30 days following its expiry.

19.0 **PENALTY FOR DEFAULT IN TIMELY COMPLETION:** Time is the essence of this Contract. In the event of the Contractor's default in timely completion of total volume of work within the stipulated period of 03 operating months, a penalty will be levied @10% per Sq. KM rate for the remaining quantity of data acquisition carried out beyond such stipulated period. However, this penalty and liquidated damages for default in timely mobilisation as per clause 17.0 above will be restricted to a maximum ceiling of 7.5% of total contract value.

SECTION - IV

TERMS OF REFERENCE AND TECHNICAL SPECIFICATIONS

1.0 Introduction:

1.1 This section establishes the scope and schedule for the work to be performed by the Bidder and describes references to the specifications, instructions, standards and other documents including specifications for any materials, tools or equipment which Bidder shall satisfy or adhere to in the performance of the work.

2.0 Scope of Work:

Seismic Data Acquisition:

2.1 This tender is sought pursuant to the award of on-land exploration Block "SHAKTHI", Gabon to a Consortium of Oil India Ltd. (OIL). OIL being the Operator, desire to acquire about 100 Sq.Km of full fold 3D Seismic data in one block in the dense equatorial forest area with difficult logistics and swamps, with dynamite as energy source.

2.2 OIL(Company) envisage to acquire the above seismic data engaging a competent international contractor having good experience in 3D seismic acquisition with state-of-the-art equipment using Dynamite as the seismic source in areas as mentioned in clause 2.1 above.

2.3 The contractor shall with their own personnel and equipment carry out Differential Global Positioning System (DGPS) based, topographic survey and 3-D Seismic data acquisition data work using Dynamite as source and LVL / Up-hole surveys in the above mentioned area. The bidder shall also have provision of a field processing unit/centre for quality control, processing of field tests, tape copying, processing of seismic data up to brute stack etc.

2.4 The contractor shall deploy the equipment of state-of-the-art technology for performing the services referred to in the tender and shall be fully responsible for the execution of surveys as per the plan that will be provided by the Company. The data acquisition system to be deployed by the bidder should have the following broad specifications:

- a) Latest Seismic data acquisition systems with 24 bit, delta-sigma technology i.e. SN408/SN428, I/O Image, Aram Aries or equivalent along with all the facilities required for seismic data acquisition using Dynamite as source.
- b) Capable of recording minimum 2880 channels/ per shot with 2 ms sampling interval for 3-D Survey.
- c) Dynamite source & other suitable equipment, accessories and shot-hole drilling rigs and its supporting accessories for deployment in undulated terrain covered with forest, high undergrowth and river /Lake/ swamps at places in Block "SHAKTHI" in Gabon (**Figure 1**).

2.5 Company reserves the option of awarding upto 50% of additional data acquisition work in the similar areas to the successful bidder, on mutually agreed rates not higher than the original contract rate.

3.0 Brief Geology of the Area:

The regional geology of the Interior Sub-basin of Gabon is controlled by the Pre-Cambrian metamorphic basement which comprises the Archaean Congo Craton, and the surrounding West Congolian Pan-African Shear Zone (**Figure 2**). The predominant structural fabric in the Pan-African basement is generally northwest – southeast trending, and considered to have influenced by rift fault distribution/failed rift.

Continently derived fluvial sediments of Permian to Jurassic age overlie unconformably on basement and infill remnant basement topography. These late Paleozoic – early Mesozoic sediments and Pre-Cambrian basement constitute the pre-rift section observed in the Interior Sub Basin.

Continental rifting between Gabon and its conjugate Brazilian margin took place in the early Cretaceous (Berriasian – Hauterivian), and formed the Interior Sub Basin. This rifting formed a fault controlled asymmetric rift basin with locally controlled horst and graben structures, which quickly developed into a deep anoxic lake.

Initial syn-rift sedimentation in the early Cretaceous is consists of basal sandstone (N'Dombo Formation) which is of continental / fluvial nature. As the lake system further developed generally muddy lacustrine turbidite (Kango, Remboue and N'Toum Formations) filled the basin. Within this turbiditic system some localised sandy channel and fan systems were developed (Forou Plage Formation). Lack of seismic evidence for syn-rift growth structures, suggests that the basin was partially sediment starved during its initial phase, possibly due to rift flank uplift deflecting drainage systems away from the graben.

Thermally induced subsidence continued during the Aptian to create accommodation space and post-rift sedimentation continued with the continental fluvial Gamba Formation filling the basin, and the Ezanga evaporites forming in a later more restricted environment.

The main structural features observed in the Interior Sub Basin are the Lambarene Horst, and the Axial Fault. The Lambarene Horst is a Pre-Cambrian horst block which forms the western margin of the basin. Syn-rift and post-rift sequences are seen thinning out across a terraced margin to this horst and form potential hydrocarbon traps. The Axial Fault trends (northwest – southeast) and runs for approximately 200km through the centre of the basin. It is a southwestwardly dipping extensional fault which exhibits Syn-sedimentary growth in the hanging wall. Along the strike there is seismic evidence of inversion anticlines showing that this fault has been partially inverted in places, leading to a number of potential hydrocarbon traps.

4.0 Objectives of the Survey:

4.1 The objectives of survey in the areas are, to delineate structure, faults, fault closures and stratigraphic traps within Eocene- Lower Cretaceous, Paleozoic levels/ age. The existing seismic sections indicate the primary objectives at around 200-2200 msec. two way time with the depth around 200-3200 m within the block.

4.2 A total of 100 Sq.Km of full fold 3D seismic data is planned to be acquired using dynamite as source in Block "SHAKTHI" on inland rift basin, southeast of Libreville, Gabon. The tentative coordinates of the proposed 3D block are given below:

Point-A: Easting- 637511, Northing- 9956545

Point-B: Easting- 640723, Northing- 9970700

Point-C: Easting- 647482, Northing- 9969241

Point-D: Easting- 644264, Northing- 9954835

5.0 Fixing of Reference Points/Bench marks

5.1 Before starting the survey in the proposed block, the successful contractor shall establish a network of positioning control points- **reference points/ bench marks using** Differential Global Positioning System (DGPS). The Bidder shall fix a minimum number of **40 (forty) Reference points/ Bench marks**, at different locations in the Exploration block, using the Differential Global Positioning System (DGPS) with L1 and L2 modes.

5.2 The successful bidder may have to fix additional reference points/ benchmarks for obtaining sufficient control.

5.3 For all the reference points mentioned in 5.1 and 5.2 above, pillars need to be fixed in such a way that they serve as permanent bench marks with proper engravings. Station descriptions should be inscribed showing station data, location of station and the coordinates etc. The Reference point markers must be constructed with the concrete base 30 x 30 x 80 cm with concrete flush to the ground and with a copper or brass survey marker disk in the center. The disk will have a center mark and a number inscription as advised by Company. A 6 cm diameter steel pipe, one meter above the ground, with station descriptions as detailed above, will be placed in concrete next to the marker.

5.4 Contractor shall submit a report covering the GPS control survey work to Company immediately after completion of observations. The report must include, but not limited to,

- i. Description of survey including method, equipment, chronological record of events, existing master station(s) used in survey, survey history of master station, survey network observed.
- ii. Detailed account of final processing including software package. Confirmation of all geodetic parameters used during processing including a detailed account and work example of how the transformation to local datum was made & final results obtained.
- iii. A detailed accurate description of each GPS control point (Reference Points/Bench marks) showing its location and approach diagram for locating the same in future, the date of fixture, monument description, a digital photograph, co-ordinates of these points, geodetic parameters, name of local datum, survey team etc.

6.0 Method of Work:

(I) Equipment & Parameters

6.1 3-D Seismic survey is to be carried out by using latest data acquisition system with 24-bit delta-sigma technology i.e. SN408/ SN428, I/O Image, Aram Aries or equivalent with Dynamite as source in the block

6.2 The data should be recorded on 3592E/DLT/LTO-3 Tape in **SEG D/SEGY Demultiplexed format** with sampling rate of 2 ms. The data should be recorded in two copies each in at least two media out of the aforesaid three media. Additionally the seismic data recorded in the operational area should compulsorily be copied /recorded offline on a continual basis at the Base camp using a standard copying software (data integrity must be maintained during copying) on one number of Network Attached Storage (NAS) Devices or equivalent with RAID 1 configuration having a data storage capacity of a minimum of 360 GB or more.

6.3 The contractor shall use the following field acquisition parameters for the 3D Seismic survey work:

- Nominal Fold : 48(12 X 4)
- Receiver (Group) Interval : 40 m
- Number of Receiver Lines/Swath : 8
- Receiver Line Interval : 320 m
- Number of Receivers per Line : 192
- Total Number of Active Receivers : 1536 (192X8)
- Source Interval : 80 m
- Swath overlapping : 50% overlapping(4 trace receiver lines are repeated)
- Shot Line Interval : 320m
- Bin Size : 20 X 40 m
- Source : Dynamite
- Shot hole depth for Dynamite shooting : Minimum 10 meters with 15 – 18 m where ever necessary
- No. of Geophones / Group : 12
- Record length : 5 sec
- Sampling interval : 2 ms
- Largest minimum-offset : 452.55 m
- Maximum-offset : 4408 m
- Aspect Ratio : 0.29

6.4 The Company desires to have symmetric sampling of offsets in each bin as far as possible. The data must have wide azimuth distribution at the offsets contributing to the primary and the secondary targets. The Contractor needs to perform detailed modelling/ ray-tracing at different parts of the block and submit their observations & suggestions to the Company. The work in the block will only start once Company is satisfied with the parameters and intimates the Contractor about the same in writing. Contractor should take actions to cover swampy areas and streams as required.

6.5 The Contractor shall carry out line survey using latest equipment such as DGPS, total stations with an accuracy of 0.5m or less from planned positions. The survey tolerance has to be checked (based on line diagram and digital data provided by the Contractor), agreed upon and approved by Company prior to commencement of shooting of each swath. Any resurvey work, if required, will be carried out at Contractor's own cost.

6.6 The Contractor shall carry out shallow refraction or LVL and Uphole surveys in acquisition area along trace lines. The LVL survey should be done at a rate of one in four sq km area where as the Up-hole surveys are to be done at a rate of

one in two Sq.Km area along the trace lines in the normal areas including the water covered areas upto 2 m water depth. The Up-hole survey should be carried out up to a depth of about 60 -70 meters. The LVL/ Uphole recording equipment should be capable of recording a minimum of 24 channels with 0.1ms sampling interval. In areas where the surface logistic does not allow shooting LVL/ Uphole profile at the specified location, the contractor will attempt to recover the same from a closest possible location.

- 6.7 The Contractor shall carry out interpretation of LVL and Uphole data and subsequent computation of statics. The tomography-based technique should also be used for the interpretation of LVL and Uphole data.
- 6.8 The contractor should have a full fledged 3D Field QC Processing system capable of checking the 3D Geometry and QC processing of acquired data capable of generating 3D stacks in any inline, cross line and any random line.
- 6.9 The above mentioned acquisition parameters indicate the minimum requirement of the Company. The work in each area, considering the possibility of one or two blocks totalling 100 Sq.Km full fold, will only start once Company is satisfied with the parameters and intimates the contractor about the same in writing.
- 6.10 Three (3) Client representatives will be associated with the acquisition work at all stages and bidder shall ensure simultaneous transfer of relevant technical knowledge and skill to the representatives.

(II) Surveying

(a) General

- 6.11 Contractor shall carry out topographical and positioning surveys in accordance with generally accepted International survey principles, good professional standards and must ensure that line clearing, camp establishment and other activities having an impact on the local environment, are performed within the environmental guidelines stipulated by the National Environmental Authority.
- 6.12 Contractor must ensure that the topographical and positioning Survey results are within the specified position accurate and contain no ambiguities. Bidder shall ensure that positioning data and maps, submitted to OIL, are correctly referenced, compatible with OIL standard formats for data processing, mapping and provide access maps & signage to facilitate logistical efficiency for all operations.

(b) Equipment

- 6.13 All the surveying equipment should be in good condition, not older than 3 years on bid closing date and shall comprise, but not limited to, the following:
 - (i) Differential GPS equipment (DGPS), receivers with data logger/controller
 - (ii) Real Time Kinematics GPS system (RTK GPS) including all computation software
 - (iii) Total stations with inbuilt EDM and data logging.
 - (iv) Hand-held GPS, any other equipment e.g. VHF repeater stations
 - (v) PC's with suitable hardware, software, I/O devices
 - (vi) Adequate accessories, consumables, sufficient spares for all equipment

(c) Survey control

- 6.14 If available, OIL will provide coordinates of national geodetic survey control, existing satellite survey control, well locations and permanent markers of previous seismic surveys in the area of operations. If available, OIL will also supply base maps or coordinates for existing seismic lines.
- 6.15 Before starting the project, the contractor shall recover existing geodetic network survey control. Bidder shall tie the 3D seismic project into the geodetic network survey control, all other seismic surveys, and all wells, unless otherwise agreed by OIL.
- 6.16 Contractor shall establish a network of positioning control points (Reference points/bench marks) for the survey using DGPS methods. The survey origin or datum point for the GPS control network shall be specified by OIL.
- 6.17 In the event that no such point or points is conveniently available, the contractor will be required to establish two points within the survey area by static GPS observations on the points over 36 hours and processing the data in conjunction with data obtained over the internet from the nearest two to three International GPS Service (IGS), GPS tracing stations. The proposed locations of the GPS control points shall be approved by OIL prior to line surveying operations commencing as the surveying of the seismic line network proceeds.
- 6.18 The GPS control point sites ultimately chosen and approved shall be in suitably cleared spaces to allow a clear, unobstructed view of the sky for good satellite signal reception. Together the GPS control stations selected should form a well conditioned network. These GPS monuments will provide the surveying control in all three dimensions for entire survey and for subsequent operations.
- 6.19 All GPS control stations should be marked by sufficiently stable steel and concrete monuments, the design of which is detailed in Clause 5.0 Fixing of Reference Points/Bench marks.
- 6.20 It is expected that additional control points shall need to be established in the operational area. Sufficient survey control stations are to be used /established so that no seismic line point shall be more than ten kilometers from the nearest control station.

(d) Topographic Surveying operations

- 6.21 Company must approve, all line surveying procedures and will specify, or must approve, all line numbering procedures. Local coordinate system of Gabon and WGS 84 system has to be followed.
- 6.22 The method of Line surveying shall be selected according to the nature of the terrain and shall be by either conventional land surveying methods i.e. Total station traverse or by dynamic Real Time Kinematics Global Positioning System (RTK GPS) methods.
- 6.23 At no point shall a line deviate more than 0.5 meters from planned line, nor shall there be at any point a change of a line direction without prior consultation with OIL. The survey tolerance has to be checked, agreed upon and approved by Company prior to commencement of shooting of each profile. Any re-survey work, if required, will be carried out at Bidder's own cost.

- 6.24 If the horizontal position of Shot point (SP) or final receiver points (RP) differ from that determined by the initial line survey by more than 1 m in position during 3D seismic surveys, the position of SP, RP must be accurately determined by re-survey and co-ordinates must be revised, prior to submitting the positioning data to company.
- 6.25 During the survey the bidder shall keep a 1:50,000 base map of the operational area up to date, indicating the GPS control points and permanent markers established and surveyed, the main topographical features and access routes etc.
- 6.26 To minimize environmental damage and to facilitate general travel within the operational area, the survey crew must prepare accurate line drawings showing access, terrain characteristics, villages, rivers, streams, tracks, line crossings, existing survey control, permanent mark locations on lines etc.
- 6.27 Line sketches must be prepared at a suitable scale and must be available prior to the commencement of recording operations on the line. Line sketches must indicate the North direction.

(e) Permanent Marks

- 6.28 Permanent Marks other than survey control and reference stations shall be placed at the beginning and end of every 5th trace line and every 2 kms along these trace lines. They shall consist of 1.0 m galvanized iron pipe, 5 centimeters in diameter, with the number clearly welded at the top in characters 5 centimeters high, buried to a depth of one meter and set in concrete mixed with cement at each permanent mark. The pipe should protrude 0.5 meters above the ground level. The permanent mark shall be painted red with its welded number outlined in white paint. The Permanent Mark shall have 30 centimeter cross bars at the bottom to prevent it from being pulled out/displaced.
- 6.29 Contractor shall be responsible for fabrication and construction of these Permanent Marks and for ensuring that duplicate and missing bench mark numbers do not occur. Permanent Marks at these locations shall be constructed at Bidder's expense.
- 6.30 Permanent Marks shall be numbered consecutively according to a convention agreed beforehand between Company and contractor. Permanent Mark diagrams, indexed by line number and showing the final co-ordinates, elevation, nearest shot-points including distances to them, topographic features, photographs and other information useful in recovery shall be included in the final report.

(f) Submission of Positioning Data, Maps and Reports

- 6.31 Contractor shall submit copies of land surveying data, including but not limited to maps, CDs and diagrams on a regular, daily, weekly and monthly basis and on specific request by Company.

(g) Survey Report

- 6.32 Contractor shall submit **(4 hard copies and one soft copy on CD)** to Company within 30 days of completion of survey contains a detailed description of all surveying activities. This final acquisition and processing report, will cover survey method, contain recommendations for future survey, accuracy of former

surveys tied to, and describe access/obstructions, and methodology. The report shall also highlight the relevant survey information, such as main factors which may have influenced the accuracy and/or the economy of the survey.

The survey report should include, but not be limited to:

- i. Details of all survey equipment used during the survey including make, serial numbers etc.
- ii. Details of the calibration method and results for each set of survey equipment
- iii. A general account of how the control and line surveying was performed, both technically and logistically.
- iv. A detailed account of how the control survey was adjusted, how the line surveying was tied to the GPS network and which points were used to control the survey coordinates.
- v. A list of all sun observations taken for azimuth control.
- vi. A listing of all control point stations emplaced during the survey. This should include station descriptions with survey history, geodetic datum, geographic and UTM co-ordinates, elevations, GPS antenna heights, photographs, access diagram and description and also a statement of their estimated accuracy. The final coordinates shall be sorted in sequence, starting with the lowest point number, without duplicate points or points without coordinates, for control stations and permanent markers established by Bidder.
- vii. An appendix containing all the control point station descriptions.
- viii. A list of co-ordinates established by the survey of other significant points such as wells, old survey or permanent markers, oil seeps etc.
- ix. Brief description of the processing method
- x. A chronological log of the main surveying and positioning activities.
- xi. Names of all surveying personnel involved in the work.
- xii. A brief of problems encountered during the line and GPS surveys including periods of instability, equipment failure, poor coverage, or malfunction for other reasons, re-shootings, major mis-ties in the land survey, resurveys and recommendations for future surveys etc.

Data Requirements

- 6.33 Control survey coordinates and elevation data shall be available prior to setting out operations in a given area. Control survey data is to be dispatched to OIL immediately on completion in formats agreed upon with Company.
- 6.34 Final source and receiver coordinates and elevation values should be presented in SPS format or other formats agreed upon with OIL. Data submissions should be made on a swath basis depending on the dispatch of the seismic acquisition data and shall include all relevant positioning information **(4 Copies on CDs)**.
- 6.35 Contractor shall also submit the following data to OIL within 30 days of completion of survey:
 - i. All raw land survey field observations data on CD with each CD appropriately labelled. Each CD should be accompanied with a hard copy printout of its contents and header information **(2 Copies)**.
 - ii. Coordinates listings of all Control Stations, Permanent Markers, Wells, Up-holes and offsets should be presented both in softcopy in the formats agreed upon with Company & hardcopy form **(2 Copies each)**.

Maps

6.36 Contractor shall submit to Company the following maps plotted on paper & in softcopy form within 15 days of the completion of survey:

- i. Shot point location maps in 3 scales (2 sets on paper & 2 softcopy form) decided by Company within the survey area covered by the new seismic lines.
- ii. Survey marker location map in 3 scales decided by Company showing all new control points and permanent markers established during the survey, all found and resurveyed old survey markers, and all reference and relay stations used for DGPS surveying operations.

All maps produced shall show, but not limited to, the following:

- i. Both the UTM and geographic graticule.
- ii. Shot-points at specified frequencies.
- iii. Line numbers clearly marked on each map
- iv. A block showing the name of the company, name of the Contractor, the name of the block, the actual map title, the data of the Work and the date of the drawing.
- v. A map scale ratio and bar scale in kilo-meters.
- vi. The type of grid projection, ellipsoid parameters, and geodetic and vertical datum.
- vii. A statement of whether the map is FINAL or PROVISIONAL.
- viii. An index sketch showing the survey area in relation to National boundaries, the topography and adjacent blocks.

6.37 All of the above maps shall be kept updated on a daily basis. Contractor shall submit transparency copies of the above maps to Company at any time throughout the survey on request.

(III) Data Acquisition :

a. Instrumentation.

6.38 Prior to mobilization, the contractor shall ensure that the recording system is loaded with the most recent reliable system software available. Unless needed to replace major system error/defect, the contractor will not replace the system software during the Survey.

6.39 Prior to the commencement of recording, the contractor shall perform a comprehensive manufacturer's recommended tests on recording equipment and all geophones and hydrophones for the survey and provide the results both in soft and hard copy form to the OIL Representative. Work may not begin until the OIL Representative has had the opportunity to review said tests and has authorized commencement of the Work. Authorization for work commencement will be given when tests are within manufacturer's specifications.

6.40 Daily and monthly tests as recommended by the manufacturer are to be recorded on tape and certified by Company Representative to ensure that the equipment is operating within manufacturer's specification

- 6.41 The contractor shall ensure that a fully qualified experienced instrument engineer will be present in the field during acceptance testing and recording start-up.
- 6.42 In the event of major recording instrument failure, a complete instrument test will be run and operations shall not resume until tests are approved by Company Representative.
- 6.43 A cyclic test rotation schedule is to be implemented for all geophone/hydrophone strings from the start of operations. If at any time more than 5% of the geophone/hydrophone strings in any sampling are defective, recording shall cease and all geophone/hydrophone strings must be tested and defective strings shall be replaced.

b. Shot hole Drilling & Dynamite Loading :

- 6.44 All shot/source points are to be drilled at surveyed locations. If for any reason it is not possible to occupy the pre-planned location, offset location will be required, unless directed otherwise by Company Representative. All offset locations must be staked by the surveyors.
- 6.45 The holes must be drilled vertically, regardless of the slope of the ground. The recommended depth is 10 meters considering hard formation but in some areas, particularly where the sub-surface formation is not hard enough to place the explosives, more depth (15 to 18 m) has to be drilled. It is envisaged that in 15 to 20% of the area the shot-hole depth has to be 15 – 18 m.
- 6.46 The charge loader shall first check that the depth of the hole meets the specified depth, using loading poles. If necessary, after drilling, shot/source points should be protected from caving by PVC pipes of a diameter greater than a made up explosive charge (for example, the pipe size shall be such that charge loading is trouble-free). The bottom section of PVC should be plugged, and each section firmly coupled together. These pipes should be of known length and should be inserted into the hole without using undue force that would fracture the pipe.
- 6.47 PVC pipe, if used, should be carefully removed only if the hole depth is satisfactory. If hole depth is not satisfactory, the pipe should be left in a raised position, but still in the hole, thus signaling that remedial work is needed.
- 6.48 If the hole depth is as per specifications, bidder shall first carefully check that the cap(s) are good using a shooters galvanometer, before insertion into charge. Cap(s) will be inserted into the top of the charge, and secure the cap leads by wrapping them around the explosive
- 6.49 At least one fully equipped drill crew should be available to support any re-drilling which becomes necessary during the source point loading process.
- 6.50 All drill crew foremen are responsible for QC of source point quality and depth. All substandard shot points will be re-drilled. Preloading foremen are to sign off on all shot points as correctly loaded and cross check against total explosives used during the day.

- 6.51 After each source point is detonated, shooting crew should verify that each source point has detonated. In the event of an unexploded shot, additional attempts should be made to detonate the charge. These attempts should be logged in the observer reports.
- 6.52 If detonation still has not occurred then the hole must be flagged as a misfire and the appropriate actions taken. The observer will log the misfire in the observer logs. The shooting crew will pull all cap-wires immediately. A listing of misfires should be given by the bidder to HSE department on a daily basis and should do the needful with accepted practices and Applicable Laws of the Gabonese Government.
- 6.53 A summary report (with photographs and coordinates of all misfires) must be provided to the Company prior to demobilization from the Work Area, and the list is to be included in operations final report.
- 6.54 All shot points shall be plugged after detonation in accordance with accepted practices and Applicable Laws to prevent subsidence.
- 6.55 Charge size to be used for dynamite shooting is to be tested in the field during experimental survey.

c. Recording Spread.

- 6.56 Geophones having natural frequency 10 Hz (SM-4 or equivalent) with long spikes for planting in the area shall be used. Geophone string performance is to be tested before start of work and also as the phones is rolled to the forward spread. Array interconnections are to be tested using a resistance meter.
- 6.57 Cables are to be tested through the recording system for damage, open or reversed pairs, or excessive leakage.
- 6.58 Geophone strings which have bad connectors, breaks in lead wire, cracked cases, broken or missing spikes must be removed from service. Repaired strings will be completely retested before being returned to operation.
- 6.59 The position of the center of each geophone array must be marked by the surveyors.
- 6.60 The geophone must be tightly coupled to the ground. This is the single most important aspect of geophone layout. In difficult ground, it may be necessary for the geophone to have some tilt, up to a maximum of five degrees from the vertical, in order to be tightly coupled; otherwise, all geophones should be planted vertically.
- 6.61 All cables and receiver stations which cross roadways or access routes should be protected and prominently flagged. Where recording crosses large roadways with fast moving traffic, extensive signage and, if necessary, flagmen should be deployed near the recording patch to minimize noise.
- 6.62 The exact receiver array is dependent on field tests/ studies but it is planned to lay the geophones in various arrays constructed from one string of 12 geophones each.

d. Bulldozer work:

- 6.63 The bidder may use bulldozer to provide access to seismic lines clearly without any obstruction including clearing the old forest tracks if necessary as per laws of land considering that there is no damage to environment.
- 6.64 The bidder shall ensure that Bulldozer crews must be in possession of all necessary consents, permits and letters of approval. All Bulldozer crews shall be equipped with a VHF radio.

f. Observer's Log

- 6.65 Detailed digital observers logs will be kept by the recording crew. Sufficient area information will be kept on each page of the observer sheet to allow for unambiguous identification of the data.

The "Front Sheet" will contain, but not limited to the following:

- i. Area information, line number, first and last SP number, first and last file number.
- ii. Geophone array Diagram
- iii. Source Array Diagram
- iv. Instruments, type, auxiliary channels and assignments, pre-amp gain, filter settings, sample rate, record length, tape format, polarity convention etc

The detailed "File Log" shall contain, but not limited to the following:

- i. List of every file on tape with its corresponding SP Number indicating tape change file number.
- ii. For each file the Observer must note dummy files, polarity errors, noisy/dead traces and any problems encountered.
- iii. First & last Channels, their corresponding receiver positions on ground, recorded against which shot point, corresponding file nos.

7.0 Period of Contract:

- 7.1 The seismic data acquisition under this Contract is expected to commence from August/September 2010. The period of data acquisition for full fold 100 Sq.Km of 3-D data acquisition and submission of reports with relevant maps shall be a maximum of three months excluding mobilization and demobilization period in the block.

- 7.2 The period of data acquisition referred to in Para 7.1 above is inclusive of national holidays, experimental work days, camp shift days, stand-by days, bad weather days and production loss due to equipment failure or any other reasons under contractor's control.

8.0 Personnel and Equipment:

- 8.1 The Contractor shall supply all personnel, experts, labours, equipment and facilities necessary for the successful completion of the work and fulfilment of the given production guarantee. However, minimum requirement of personnel and equipment are listed vide Annexure - I & II.

9.0 Start of Work:

9.1 The Contractor must complete mobilization and commence work within 120 days from the date of issue of LOA by Company. Company prefers that Contractor will mobilize all the survey equipment within 90 days from the date of issue of LOA, so that initial survey work can be taken at an early date, immediate to LOA. This will help the contractor to commence production shooting immediately after the entire mobilization is completed in 120 days. The period for the completion of the job will be counted from the time when the first acceptable production shot is taken and certified by the company representative as acceptable.

10.0 Experimental Work:

10.1 All necessary experiment and other tests to determine optimum field parameters shall be performed prior to commencement of data acquisition. The tests shall be carried out as per the international practice in the Seismic Industry. It may be required to carry out certain field test/experimental shooting to select some field parameters at the request of the company. Any time spent on this, however will be paid on a pro-rata basis as experimental shooting per day rate.

10.2 The Contractor may provide at their own cost expert R&D personnel for consultation in Gabon, at site during experimentation stage at the beginning of the work, and later during acquisition for QC.

11.0 Data / Cartridge Liability

11.1 Contractor shall be solely responsible for quality, loss or damage due to any reason including fire, theft, etc. of any documents / cartridge / soft copies and other important documents / CDs etc. pertaining to the contract while in their custody or control. In the event of such loss, the Contractor shall be responsible to redress / re-shoot the loss entirely at their own cost. However the decision on the modalities to re-shoot / redress against such losses shall be entirely at the discretion of Company. The Contractor shall use original, high quality, high durability; error free IBM **3592E/DLT/LTO-3** cartridges with zero write-skip error, zero read error and zero write error. Each and every cartridge is to be 100% tested to ensure error free performance at specified high recording density. It should be ensured that the integrity of the data copied / recorded offline on the NAS storage devices is preserved and checked for the entire volume of data.

12.0 Deliverables and Schedule of Performance:

Seismic Data Acquisition

12.1 Contractor shall maintain all their equipment in perfect working condition and submit daily, weekly and monthly reports of the performance of the equipment to the Company. The Contractor shall have the facility to process, generate and provide performance report of the equipment at site. Contractor will provide monthly performance tests in cartridges for QC. If the Company's authorized representative is not satisfied with the report submitted and performance of the equipment, the Contractor shall suspend the operations till the Company's representative is satisfied with the performance of the equipment. No payment shall accrue to the Contractor during the period the work is suspended as aforesaid.

12.2 Contractor shall submit a detailed report on selection of the field parameters within 40 hours of the completion of the experimental work. The Company will give its views within 40 hours of the receipt of the report on experimental shooting. The seismic production shooting will not start unless the Company is satisfied with the results of experimental work.

12.3 Contractor shall submit to the Company a weekly report on data quality control of the jobs undertaken during acquisition. Contractor will have to carry out preliminary processing of the data for quality control purpose and submit weekly report on data quality to the Company. If the Company representative finds that the quality of the data is not in accordance with the stipulation in the agreement then, he/she may instruct the Contractor for re-shooting. Re-shooting cost would be entirely to the Contractor's account.

12.4 Everyday after completion of shooting, the Contractor will provide necessary plots, data of foldage diagram, offset and azimuth distribution to the Company representative resulting from day's shooting. In case of skip shots points the contractor shall plan appropriate recovery shots for recovering the loss of geophysical attributes. The Contractor will put all out effort to take recovery for each shot skipped at the nearest possible point. Any skip of shot, which is not recovered & not certified by Company representative, will be re-shot by the Contractor at its own cost. The Company representative must be satisfied with the action taken in case of anomalies. The production shooting for the day will only start after the Company representative is satisfied with these results.

12.5 Apart from above, Contractor shall submit:

i) Daily report consisting of:

- daily survey progress ;
- drilling report ;
- daily field test reports;
- recording progress ;
- uphole & refraction profiling report ;
- quality control reports ;
- explosive consumption / stock report.

ii) Weekly report consisting of :

- weekly progress of survey & recording ;
- uphole & refraction profiling report ;
- quality control including stacks generated ;
- explosive consumption/stock report ;
- summary of data transmitted to Company ;
- summary of Health, Safety & Environment incidents .

iii) Monthly report consisting of :

- monthly progress of survey (with line sketch) & recording ;
- uphole & refraction profiling report ;
- quality control reports and seismologists report ;
- intersection information with survey & statics mismatch if any ;
- number of permanent reference points/pillars fixed with detail

- coordinate, sketch with cultural information ;
- explosive consumption/stock report ;
- summary of Health, Safety & Environment incidents ;
- list of visitors ;
- list of personnel, equipment.

12.6 Contractor will submit/deliver the following data to the authorized Company's representative at site within 10 days of completion / termination of recording of the swath:

- Seismic data cartridges for each swath (2 copies of the data) in desired Format etc. on IBM 3592E/DLT/LTO 3 media and one copy on USB external HDD in SEGD Format.
- Observer's reports with shot-receiver geometry, hole depth, Active & dead channels, charge size, uphole times, ITB/misfires, skip-recovery, edits, recording parameters, up-hole and refraction profiles in internationally acceptable formats;
- Survey data in UKOOA, ASCII format, base maps, coverage map, map showing location of Uphole and refraction profiles, receiver and shot station computed for LVL/Uphole in ASCII format along with the interpretation of the refraction profile & statics correction data;

12.7 Contractor shall submit a final report for each block covering the entire operation within 20 days of the completion of work in the block which must include:

- Review of geophysical objectives & success of the project in meeting the objectives including the data quality;
- Detailed information on Mob, Demob of equipment & personnel;
- Field experiment procedure & results;
- Sample field record, uphole plot, refraction profile and processed section;
- Base map in desired scale;
- Map showing location of uphole & refraction profiles;
- Data quality map;
- Operational summary including total survey, explosive consumption, logistics etc;
- Recommendations, if any.

12.8 DGPS Surveying & Line Surveying Report

The Contractor shall submit an interim report covering all the DGPS works within thirty days of completion of observations. This report should include the following but not limited to:

- a. Description of the survey including method, equipment, chronological record of events, existing reference station(s) used in the survey, survey history of the reference station, etc.
- b. Detailed account of the final processing including the final results in the WGS84 datum and geographic & local grid co-ordinates on the local datum, software packages used etc.

- c. A summary of all the geodetic parameters used during processing including a detailed account of how the transformation was made to the local datum & geoidal model used to provide orthometric height above the mean sea level.
- d. A detailed station description of each reference point established showing location and approach diagram, photograph, geographic and local grid coordinates reduced to the top of the monument, monument description, geodetic parameters, name of datum (observed & local), antenna height, date established, observation duration, master station used in the translocation & a statement on the estimated accuracy of the surveying results.
- e. A general account of how the land surveying was performed both technically and logistically.
- f. A detailed account of how the land survey was adjusted.
- g. A discussion on any problems encountered during the DGPS survey & Line survey including the period of instability, equipment failure, poor coverage, navigation system down-time or malfunction for other reason, resurveys, misties in land surveys, resurveys, and recommendations for future surveys.

Similarly Contractor shall provide a final report of the work within 30 days of completion of the work, covering the subjects as given above. Contractor may also give summary of the problems faced during the work.

12.9 The Contractor shall arrange the location maps in three scales, as will be decided by Company within 15 days after the end of survey in a block and final composite maps within 10 days after completing the entire project. However, the Contractor shall from time to time update the base maps with the progress of the survey and the same shall be made available to the Company as and when required. The Contractor must also provide digitized base map with information of shot-points, trace points, reference points, logistics etc. in proper and internationally accepted format, within the time frame specified above in this paragraph. The Contractor shall provide to the Company the hard copies of colour plots and other plots to show adequate bin coverage and offset distribution within a bin as specified.

13.0 Quality of Work:

13.1 Contractor shall carry out the services (3D data acquisition) in a fully professional manner and warrant that the information produced shall be of a quality acceptable to Company. Should the information produced be of a quality not acceptable to the Company, the contractor will undertake to re-perform that part of the services causing dissatisfaction at their own expense. Company's standard for the performance shall be as per by the IAGC standard of the Geophysical Industry.

13.2 Company reserves the right, before commencement of data acquisition, to inspect and approve contractor's equipment after it is completely assembled and ready for work.

13.3 Company also reserves its rights to inspect the contractor's equipment at any time during operation. Any equipment found defective shall be replaced within the shortest possible time without disruption of the work assigned under the contract. No extension will be granted to the contract on these grounds. Any equipment found defective more than two times during the tenure of the contract will be replaced by the contractor

forthwith at their own cost. The time for replacement shall not be more than two weeks from the date the equipment is found defective second time during the period of the contract. No payment will be made, if operations are suspended on account of non-availability of equipment.

14.0 Bad Records:

14.1. The field records will be as per SEG standard Polarity with the following will be considered as bad records:

- Record with noisy/ dead traces more than one percent of total number of traces in each record.
- Inconsistent Polarity
- Records containing more than two consecutive noisy/ dead trace will be considered as bad records.
- Record with sync error.
- Record with parity error(s).
- Record with appreciable cross-feed, leakage and spread noise.

14.2 If the signal- to-noise ratio is not acceptable due to poor loading depth or other wise which is under control of the contractor, the same shall be re-shot by the Contractors.

14.3 Records defined in para 14.1 to 14.2 herein above shall be considered as bad records and the Contractor shall re-shoot such bad records. Re-shooting cost would be entirely to the Contractor's account.

15.0 Equipment Test and Calibration:

15.1 A set of daily tests for equipment and status of cables and geophones shall be performed and recorded on tapes before the start of daily operation to the satisfaction of Company's Representative.

15.2 A set of standard tests shall be run prior to the commencement of survey and also at fortnightly/ monthly intervals. These tests shall be evaluated and result of the same should be given to the Company's representative within 24 hrs. of the tests carried out.

15.3 Calibration of all the systems is the contractor's responsibility. Calibration shall be carried out at the start of seismic survey and also frequent checks on calibration should be made as and when required. Documentary evidence of the calibrations shall be made available to the Company's representative.

15.4. Polarity checks and geophone response shall be carried out regularly to the satisfaction of Company's representative.

15.5 The bidder shall arrange all the monitoring devices/ equipment required to check the performance of seismic recording unit and all other accessories including cables and geophones on a regular basis (preferably every fortnight).

16.0 Environmental Guidelines, Safety and Medical Plan

(A) Environmental Guidelines:

The contractor shall submit an Environmental and Emergency Response Plan with the bid, the implementation of such plan will form part of the conditions of the Contract. The contractor's shall be responsible for complying with all Environmental regulations and procedures of Gabon. The Environmental and Emergency Response Plan will cover, but not be limited to the following items:

- Bidder's Corporate Environment Policy
- Environmental Management
- Line Responsibilities
- Field Monitoring
- Audits
- Training
- Operational guidelines
- Seismic source impact monitoring
- Antiquities in the survey area
- Base camp
- Sewage and waste disposal
- Hazardous materials
- Fuel storage
- Fuel withdrawal from storage systems
- Fuel replenishment
- Environmental Emergency Response Plan
- Reporting

All work under this Contract shall be performed in compliance with the HSE Requirements of Government of Gabon. Any environmental guidelines for seismic exploration surveys issued by the environmental authority or Governmental Entity of Gabon, and designed to minimize environmental impact of seismic survey activities in the region, should be adhered to. A copy should be available on the Crew. Irrespective of whether or not such guidelines exist, the following preventive measures must be followed by the Crew(s) to ensure that survey operations are performed with continuous attention to good environmental practice.

General Measures

Seismic lines, camps etc. shall be located in areas to avoid the cutting of trees, mangroves and the protective vegetation in riverbeds or water springs especially within areas that have been declared as forest reserves/National Park/Sanctuary.

- Camps must not obstruct surface drainage. The campsites must be restored, through forestation, to a state where they will return to their original state of vegetation. There should be no collection and capture of flora and fauna for any purposes.
- There should be no collection of archaeological material. Survey work should be in a manner to minimize disturbance of rural residential areas, cattle or other animals in the area.

- No garbage or other non-biodegradable waste, such as oil, plastic bags and bottles, cans, glass bottles, etc., or any other form of debris should be allowed to litter worksites, work areas, camp sites, staging areas and seismic lines.
- The construction of camps and fixing of shot points in critical zones such as human settlement, fauna reproduction sites, mangroves, rivers, estuaries, lagoons, water springs swamps and archaeological sites, must be avoided.
- The clearing of seismic lines for access must be in accordance with the local environmental guidelines. Line Clearing Cutting crew(s) should avoid cutting trees.
- All road, trail, and track intersections should be marked with adequate signage such as to allow crews to efficiently reach their areas of work with minimum of travel time. Additionally, any installations/features in the vicinity of a line, which might be a source of noise while recording, must be noted, marked on the line sketches, and communicated to the recording crew to allow them to take these obstacles into account.
- Bulldozer crews will be in possession of all necessary consents, permits and letters of approval from Appropriate Authorities. All Bulldozer crews will be equipped with a VHF radio, winch, jack-all, emergency provisions, and first aid kit.
- Prior to commencement of acquisition work/operations, the Survey crew will prepare detailed Line access diagrams, including the location of all shot point and access to these locations. Line sketches shall be produced from the Mapping system of the survey crew.
- Camp for the labours recruited from the operational areas must have adequate facilities for clean water, electricity, sanitation, good kitchen facilities for hygienic food with dining space, beds with mosquito nets, security arrangements and other requirements so that it meets the requirement as per the guidelines of the Gabon government.

(B) Safety consideration:

The Bidder shall submit a Safety Plan with the bid; the implementation of which will form part of the conditions of the Contract. The Bidder shall comply with all safety procedures and training requirements. This safety plan will cover, but not limited to, the following items:

- Bidder's Corporate Safety Policy
- Identification of Hazards
- Definition of line Responsibility for Safety
- Operational safety
- Transportation
- Minimum Vehicle Standards
- Land Operations
- Alcohol and Drug Policy
- Medical and First Aid Policy
- Safety training

Safety auditing
Safety meetings
Safety drills
Emergency procedures including Medivacs
Reporting

Safety Statistics

The Bidder should supply safety statistics relevant to the crew being offered for the work, covering the last 12 months. Any abbreviations used should be explained clearly to avoid confusion, and the basis for calculating man-hours exposure should be explained. These statistics should include, but not necessarily be limited to, Fatalities, Lost Time Accidents, Near Misses, Total Man-hours Exposure.

Incident / Accident Reporting

Reporting of all Near Misses, Environmental Incidents and Lost Time Accidents is mandatory. These reports should be analyzed on an ongoing basis, with appropriate preventative actions being taken as necessary.

(C) Medical Facilities in the Survey Area

The following medical facilities shall be a minimum:

1. Clinic

- Adequate space for a bed, doctor's desk/work space. Adequate storage for personnel records, medical equipment, medical supplies, medicines and literature/documentation.
- Full complement of general medical equipment, supplies and medicines.
- Air Conditioning
- Emergency Lighting
- Easy clean surfaces
- Refrigerator
- Water testing kit
- Sink with hot and cold running water
- Sterilising unit (UV or hot water)
- Eye Wash Station
- Stretcher/Backboard *
- Neck Brace *
- Trauma Kit *
- Fluid Infusion set (intravenous)*
- Oxygen resuscitation kit *

2. Ambulance (Suitable for operating in the survey area)

- Adequate space for stretcher and Doctor in attendance with medical equipment.
- Air Conditioning
- SSB Communications and/or Satellite phone
- Lighting
- Stretcher/backboard *
- Neck Brace *
- Trauma kit *
- Oxygen resuscitation kit *
- Fluid Infusion set *

*Probably kept in clinic and only transferred to Ambulance when required, i.e. must be portable.

The Bidder shall provide detail of the medical personnel and equipment it proposes to provide in the survey area/camps (Main camp & flycamp).

(D) Applicable Standards

Bidder shall comply with all instructions and recommendations arising from any Environmental Study to be performed in the Contract Area prior to, or during, the Survey. Bidder shall also comply with the contents of the following documents (copies to be kept in camps)

- Safety Manual for Land Geophysical Operations (IAGC)
 - IAGC's Environmental Guidelines for Worldwide Geophysical Operations
 - E & P Forum Health and Safety Schedules for Land Geophysical Operations
-

SECTION V

SCHEDULE OF RATES (Part-A) / PRICE BID FORMAT (PART-B)

PART-A

DATA ACQUISITION

1.0 MOBILISATION CHARGES (M):

- i) Mobilisation charges shall be a lump sum charge for the entire crew and equipment and shall be paid once after completion of mobilization.
- ii) Mobilisation charges shall be inclusive of transportation and other costs for all spares/ consumables/ accessories and equipment.
- iii) Mobilisation charges will be payable only when all equipment and crew are positioned at the appointed site free of defects/ any encumbrances and duly certified by the Company's representative that the contractor is in a position to undertake/ commence the work assigned under the contract.
- iv) Mobilisation charges shall cover all local and foreign costs of the contractor to mobilise the equipment to the appointed site and should include all duties and other local and foreign taxes, port fees and inland transport to the appointed site.
- v) Contractor is required to furnish details in relation to all equipment/spares/consumables/any other material brought by the contractor as per the **format given in Annexure-III**. The list of items should be comprehensive and should include all the materials required for completion of work.
- vi) The mobilization charges offered should not exceed 10 % of the total estimated contract value.

2.0 CHARGE FOR REFERENCE POINT FIXING USING DGPS (DG)

- i) The rate per point is to be quoted for the above.
- ii) The charge per point should be all-inclusive.

3.0 RATES FOR EXPERIMENTAL SHOOTING, RATE PER DAY: (EX)

- i) Experimental work rate of 3-D seismic survey per day (8 hrs per day actual working in field excluding travel time to and from camp)
- ii) If the experimental work is done for a part of the day, payment will be done on pro-rata basis for hours certified by the Company's representative.

4.0 RATE FOR 3-D SEISMIC DATA ACQUISITION:

- i) Charges shall be payable on per Sq. KM basis for 3D Seismic data with full fold of 48. The work carried out by the contractors will be worked out in terms of Sq. KM as follows:

Let number shot points required for full fold 100 Sq. KM surface coverage be X (Please refer clause 6.3 of Terms of Reference & Technical Specifications).

Number of shot points required per Sq. KM with full fold of 48 (Y) = $X / 100$

If total number of acceptable shot-points carried out by the contractor in the block is TNSPs, then

$$\text{Total Sq. KM} = \text{TNSPs} / Y$$

- i. Operating charges should include all the charges for the equipment/ accessories, cost of fuel, spares, preventive maintenance, mob/demob of on/off crews, consumables to and fro transportation, LVL, Uphole survey, messing, camp establishment/ maintenance and repair of support infrastructure, shifting of camp, compensation for crop and property damages, medical of personnel, hire of any support infrastructure, pegs, crossing, etc., and including income tax, other local taxes and fees which are the Contractors liability.
- ii) All the 3D seismic data acquired and delivered to Company shall be with complete observer reports, navigation data etc. required for processing the data.
- iii) Seismic data acquisition charges should also include charges against **crop/land/forest compensation** and any other damages in the field, **Data Processing minimum upto Brute-stack in the field for quality control purpose.**

5.0 STAND- BY CHARGE OF EQUIPMENT WITH CREW, RATE PER DAY (SBWC)

- i) The above stand by charge of equipment with crew shall be applicable after the start of operations in case the contractor needs to stop the operations after receiving written instructions from Company on account of certain unforeseen reasons.
- ii) The stand-by charge of equipment with crew will be all inclusive and will be paid on pro-rata basis for the number of production hours lost as certified by Company's representative.

6.0 FORCE-MAJEURE, RATE PER DAY (FM)

This rate will be applicable during Force Majeure condition of the contract and payable on per day basis.

- i) Payment will be done on pro-rata basis for hours certified by the Company's representative.

7.0 DE-MOBILISATION CHARGES (DM), if any

i) The de-mobilisation charges, if any, should be quoted as lump-sum charges which will include all charges for de-mobilisation of all equipment and crews with all supporting provisions from the camp where the survey concludes.

ii) The de-mobilisation charge, if any, would be paid only once at the end of the contract.

iii) OIL shall serve notice to contractor to commence demobilisation. Contractor will ensure that demobilisation is completed within 60 days of notice from OIL.

iv) All charges connected with de-mobilisation including all fees and taxes in relation thereto and insurance & freight on re-export of any equipment or material will be to Contractor's account.

PART-B

SUMMARY OF RATES TO BE QUOTED BY THE BIDDER FOR 3D SEISMIC DATA ACQUISITION

1. The Bidder shall quote the rates as per the format given below :

ITEM	UNIT	QUANTITY	CURRENCY	UNIT PRICE	TOTAL PRICE
A. Mobilisation Charges For 3D seismic crew	Lump sum	1			
B. Cost of fixing reference points using DGPS	Per Point	40 Points			
C. Cost for Experimental Shooting for 3D Data	Per Day	10 Days			
D. Cost of acquiring full fold 3D seismic data with 10 m hole depth	Per Sq.Km	100 Sq.Km			
E. Stand-by charge for equipment with 3-D crew	Per Day	10 Days			
F. Force majeure charges for equipment with 3-D crew	Per Day	10 Days			

ITEM	UNIT	QUANTITY	CURRENCY	UNIT PRICE	TOTAL PRICE
G. Demobilisation charges for 3D acquisition crew, if any	Lump sum	1			
Total Charges for Seismic Data Acquisition : A+B+C+D+E+F+G					

Notes :

i) **All the quantities shown above are for bid evaluation purpose only. The payment, however, shall be made for actual quantity of the work done.**

ii) **The contractor shall be paid the operating charges only based on the cost of every Sq. Km of acceptable data acquired by the bidder and provided to Company in requisite form.**

SECTION VI

SPECIAL CONDITIONS OF CONTRACT

1.0 **ASSOCIATION OF COMPANY'S PERSONNEL**

1.1 Company's geophysicists will be associated with the work through out the operations. The Contractor shall execute the work of seismic data acquisition with professional competence and in an efficient and workman-like manner and provide Company with a standard of work customarily provided by reputed geophysical contractors to major International oil companies in the petroleum industry.

1.2 The final field parameters will be decided with the prior approval of the Company's representatives after conducting the field tests and test processing. Contractor shall not change any parameters without prior approval of Company's representative.

2.0 **PROVISION OF PERSONNEL AND FACILITIES**

2.1 The Contractor shall provide the key personnel as give in **Annexure-I**, for consultancy, quality control and data acquisition.

2.2 All the personnel mentioned in Annexure- I must have requisite experience in respective fields and should be fluent in English language. On Company's request, Contractor shall remove and replace at his own expenses any of their personnel whose presence is considered undesirable in the opinion of the Company.

2.3 The contractor shall be responsible for, and shall provide all requirements of their personnel and of their sub-contractor, if any, including but not limited to their insurance, housing, medical services, messing, transportation (both air and land transportation), vacation, salaries and all amenities, termination payment and all immigration requirement and taxes, if any, payable at no extra charge to the Company.

2.4 The contractor shall furnish the list of equipment with type, make, and year of manufacture with supporting documents along with their offer.

3.0 **LABOUR:** The recruitment of the labour shall meet the prevailing laws of Gabon (necessary guideline/permission to be obtained by the contractor)

4.0 **CONFIDENTIALITY OF INFORMATION:** All information obtained by Contractor in conduct of operations and the information/ maps provided by Company to the Contractor shall be considered confidential and shall not be divulged by Contractor or its employees to any one other than Company's representative. This obligation of Contractor shall be in force even after termination of the Contract.

5.0 **PAYMENT & MANNER OF PAYMENT, INVOICES**

5.1 Company shall pay to Contractor, during the term of the contract, the amount due from time to time calculated according to the rates of payment set and in accordance with other provisions hereof. No other payments shall be due from Company unless specifically provided for in this contract. All payments will be made in accordance with the terms hereinafter described.

5.2 All payments due by Company to contractor hereunder shall be made at contractor's designated Bank. Bank charges, if any, will be on account of the Contractor.

5.3 Payment of any invoices shall not prejudice the right of Company to question the validity of any charges therein, provided Company within one year after the date of payment shall make and deliver to contractor within notice of objection to any item or items, the validity of which Company questions.

5.4 Contractor will submit six sets of all invoices to Company for processing of payment. Separate invoices for the charges payable under the Contract shall be submitted by Contractor for foreign currency and Gabonese currency, if applicable.

5.5 Contractor shall raise invoice for the lump sum mobilization charges when the entire equipment and key personnel is ready at respective sites, duly certified by Company's representatives, for starting the work.

5.6. The Contractor shall raise monthly invoices for the data acquired during the month and that has been handed over to the company at Libreville along with Up-hole (static correction) data and necessary topographic survey data / observer report etc. The data submitted without these shall be considered as incomplete invoices.

5.7 The Contractor shall raise monthly invoice for reference point fixing by DGPS after fixing the reference points and submitting the processed data with a report to OIL.

5.8 Payment of monthly invoices, if undisputed, shall be made within 45 days following the date of receipt of invoice by Company except for the first two (2) monthly invoices where some delay (upto one month) might occur.

5.9 The Company shall, within 30 days of receipt of the invoice, notify contractor of any item under dispute, specifying the reason there of, in which event, payment of the disputed amount may be withheld until settlement of the dispute, but payment shall be made of any undisputed portion on or before the due date. This will not prejudice the company's right to question the validity of the payment at a later date as envisaged in para 5.3 above.

5.10 The acceptance by contractor of part payment on any billing not paid on or before the due date shall not be deemed a waiver of contractors rights in respect of any other billing, the payment of which may then or thereafter be due.

5.11 Contractor shall maintain complete and correct records of all information on which contractor's invoices are based upto two (2) years from the date of last invoice. Such records shall be required for making appropriate adjustments or payments by either party in case of subsequent audit query/objection.

6.0 RATE OF PAYMENT:

Company shall make the payments of completed jobs to the Contractor as per the quoted rates as referred to in Section V.

7.0 LIABILITY

7.1 Except on otherwise expressly provided, neither Company nor its servants, agents, nominees, contractors, or subcontractors shall have any liability or responsibility whatsoever to whomsoever for loss of or damage to the equipment and/or loss of or damage to the property of the Contractor and/or their contractors or subcontractors, irrespective of how such loss or damage is caused and even if caused by the negligence of Company and/or its servants, agents, nominees, assignees, contractors and subcontractors. The Contractor shall protect, defend, indemnify and hold

Company harmless Company from and against such loss or damage and any suit, claim or expense resulting there from.

7.2 Neither Company nor its servants, agents, nominees, assignees, contractors, subcontractors shall have any liability or responsibility whatsoever for injury to, illness, or death of any employee of the Contractor and/or of its contractors or subcontractors irrespective of how such injury, illness or death is caused and even if caused by the negligence of Company and/or its servants, agents, nominees, assignees, contractors and subcontractors. Contractor shall protect, defend, indemnify and hold Company harmless from and against such liabilities and any suit, claim or expense resulting there from.

7.3 The Contractor hereby agrees to waive its right to recourse and further agrees to cause their underwriters to waive their right of subrogation against Company and/or its underwriters, servants, agents, nominees, assignees, contractors and subcontractors for loss or damage to the equipment of the Contractor and/or its subcontractors when such loss or damage or liabilities arises out of or in connection with the performance of the Contract.

7.4 The Contractor hereby further agrees to waive its right of recourse and agrees to cause their underwriters to waive their right of subrogation against Company and/or its underwriters, servants, agents, nominees, assignees, contractors and subcontractors for injury to, illness or death of any employee of the Contractor and of its contractors, subcontractors and/or their employees when such injury, illness or death arises out of or in connection with the performance of the Contract.

7.5 Except as otherwise expressly provided, neither Contractor nor their servants, agents, nominees, contractors or subcontractors shall have any liability or responsibility whatsoever to whomsoever for loss of or damage to the equipment and/or loss or damage to the property of the Company and/or their contractors or subcontractors, irrespective of how such loss or damage is caused and even if caused by the negligence of Contractor and/or its servants, agents, nominees, assignees, contractors and subcontractors. The Company shall protect, defend, indemnify and hold harmless Contractor from and against such loss or damage and any suit, claim or expense resulting there from.

7.6 Neither Contractor nor their servants, agents, nominees, assignees, contractors, subcontractors shall have any liability or responsibility whatsoever to whomsoever or injury to, illness, or death of any employee of Company and/or of its contractors or subcontractors irrespective of how such injury, illness or death is caused and even if caused by the negligence of Contractor and/or their servants, agents, nominees, assignees, contractors and subcontractors. Company shall protect, defend indemnify and hold harmless Contractor from and against such liabilities and any suit, claim or expense resulting there from.

7.7 The Company hereby agrees to waive its right of recourse and further agrees to cause its underwriters to waive their right of subrogation against Contractor and/or its underwriters, servants, agents, nominees, assignees, contractors and subcontractors for loss or damage to the equipment of Company and/or its contractors or subcontractors when such loss or damage or liabilities arises out of or in connection with the performance of the Contract.

7.8 The Company hereby further agrees to waive its right of recourse and agrees to cause it underwriters to waive their right of subrogation against Contractor and/or its underwriters, servants, agents, nominees, assignees, contractors and subcontractors for injury to, illness or death of any employee of the Company and of its contractors, subcontractors and/or their employees when such injury, illness or death arises out of or in connection with the performance of the Contract.

8.0 **CONSEQUENTIAL DAMAGE:** Neither party shall be liable to the other for special, indirect or consequential damages resulting from or arising out of the Contract, including but without limitation, to loss of profit or business interruptions, howsoever caused and regardless of whether such loss or damage was caused by the negligence (either sole or concurrent) of either party, its employees, agents or sub-contractors.

9.0 **WAIVERS AND AMENDMENTS:** It is fully understood and agreed that none of the terms and conditions of the Contract shall be deemed waived or amended by either party unless such waiver or amendment is executed in writing by the duly authorized agents or representatives of such party. The failure of either party to execute any right of termination shall not act as a waiver or amendment of any right of such party provided hereunder.

10.0 INDEMNITY AGREEMENT

10.1 Except as provided hereof Contractor agrees to protect, defend, indemnify and hold Company harmless from and against all claims, suits, demands and causes of action, liabilities, expenses, cost, liens and judgment of every kind and character, without limit, which may arise in favour of Contractor employees, agents, contractors and contractor's or their employees on account of bodily injury or death, or damage to personnel/property as a result of the operations contemplated hereby, regardless of whether or not said claims, demands or causes of action arise out of the negligence or otherwise, in whole or in part or other faults.

10.2 Except as provided hereof Company agrees to protect, defend, indemnify and hold Contractor harmless from and against all claims, suits, demands and causes of action, liabilities, expenses, cost, liens and judgement of every kind and character, without limit, which may arise in favour of Company employees, agents, contractors and contractor's or their employees on account of bodily injury or death, or damage to personnel/property as a result of the operations contemplated hereby, regardless of whether or not said claims, demands or causes of action arise out of the negligence or otherwise, in whole or in part or other faults.

11.0 INDEMNITY APPLICATION: The indemnities given herein above, whether given by Company or Contractor shall be without regard to fault or to the negligence of either party even though said loss, damage, liability, claim, demand, expense, cost or cause of action may be caused, occasioned by or contributed to by the negligence, either sole or concurrent of either party.

12.0 WITH-HOLDING

12.1 Company may with-hold or nullify the whole or any part of the amount due to contractor on account of subsequently discovered evidence in order to protect company from loss on account of :-

- a) For non-completion of jobs assigned as per Section IV.
- b) Contractor's indebtedness arising out of execution of this contract.
- c) Defective work not remedied by contractor.

- d) Claims by sub-contractor of contractor or other field or on the basis of reasonable evidence indicating probable filing of such claims against contractor.
- e) Failure of contractor to pay or provide for the payment of salaries/wages, contributions, unemployment compensation, taxes or enforced savings withheld from wages etc.
- f) Failure of contractor to pay the cost of removal of unnecessary debris, materials, tools, or machinery.
- g) Damage to another contractor of Company
- h) All claims against contractor for damages and injuries, and/or for non-payment of bills etc.
- i) Any failure by contractor to fully reimburse Company under any of the indemnification provisions of the contract. If, during the progress of the work contractor shall allow any indebtedness to accrue for which Company, under any circumstances in the opinion of company may be primarily or contingently liable or ultimately responsible and contractor shall, within five days after demand is made by Company, fail to pay and discharge such indebtedness, then company may during the period for which such indebtedness shall remain unpaid, with-hold from the amounts due to contractor, a sum equal to the amount of such unpaid indebtedness. When all the above grounds for with-holding payments shall be removed payment shall thereafter be made for amounts so withheld.

13.0 **APPLICABLE LAW**

13.1 The Contract shall be deemed to be a contract made under, governed by and construed in accordance with the laws of Gabon.

13.2 The contractor shall ensure full compliance of various Gabonese Laws and Statutory Regulations and obtain necessary permits/licenses etc. from appropriate authorities for conducting operations under the contract:

14.0 **OBLIGATIONS OF THE CONTRACTOR**

14.1 **SECURITY:** Proper Security in the camps / explosive magazine sites, transportation in field / loading and all related field / spread operation shall be arranged by the Contractor at its own cost.

14.2 Accommodation, transportation to field site/camps and other necessary camp amenities, wages/salaries etc for the security personnel deployed by contractor for its camps/explosives magazine sites etc. shall be the responsibility of the Contractor at its own cost.

EXPLOSIVES AND DETONATORS:

14.3 Explosives and Detonators will be procured and will be stored in the main magazine by the OIL itself. The contractor will collect explosive and detonator from the main magazine and from there, Security, Portable magazine, Storing, Transportation, Handling, Licences including Shot Firer licenses will be exclusively Contractor's responsibility.

14.4 The Contractor shall deploy adequate Licensed Shot Firers for Seismic Data Acquisition, when Dynamite is used as source.

14.5 Contractor shall maintain proper account of the consumption of explosives and detonators and shall submit daily, weekly and monthly consumption/stock statements to the Company.

14.6 Contractor at their cost shall arrange the clearance of all equipment, spare parts, consumable, etc. from customs and port authorities in Gabon. Company will provide all reasonable assistance but the responsibility for clearance will rest with the Contractor. Any demurrage in this process will be at Contractor's cost.

14.7 Contractor shall arrange for inland transportation of all equipment, etc. from the port to the place of work and back at the end of the work at their own expense.

14.8 Contractor shall arrange at their own cost all consumables & spares including papers, photographic materials, magnetic tapes/cartridges, and other consumables and spares needed for the work and shall carry sufficient stocks of these for uninterrupted operation. Contractor shall use cartridge tapes tested for zero error.

14.9 All the field tapes of experimental data will be provided to Company at no extra cost.

14.10 Contractor shall ensure minimum 8 working hours work on each working day excluding travel time. Two days in a calendar month are allowed for maintenance of equipment, if desired, by the Contractor, but no payment will be due for the same and this cannot be carried forward to next months.

14.11 Contractor shall keep their equipment in good working order and shall begin the survey with adequate supply of spares for the equipment.

14.12 The Contractor shall arrange drinking water (mineral water) and its transportation to camp/site at its own cost for OIL's representatives.

14.13 In case the Contractor imports the equipment etc. on re-export basis, the Contractor shall ensure for re-export of the equipment and all consumables and spares (except those consumed during the Contract period) and complete all documentation required. Company will issue necessary certificates etc. as required.

14.14 The Contractor shall make necessary arrangements for uninterrupted supply of electricity, water and medical facility etc. at camp/site at his own cost including for company representatives.

14.15 Contractor should provide the list of items to be imported in the format specified in Annexure-III.

14.16 The Contractor should arrange for re-export of equipment within 60 days of notice of demobilisation issued by the Company.

14.17 The Contractor should use latest software packages and shall incorporate the up-gradation of these software immediately.

14.18 The Contractor shall furnish the list with Bio-data of key personnel proposed to be deployed prior to the commencement of work. The bio-data shall include the name, nationality, qualification, experience and passport details of the person.

14.19 The Contractor's key personnel must have thorough knowledge of English.

14.20 The Contractor's personnel must be sound enough to provide the above services in international standard, failing which Company reserves the right to ask for removal of any Contractor's Personnel with 24 hours notice. A suitable replacement shall be placed within 72 hrs by the contractor at its own cost.

14.21 Contractor will also provide Company accurate position of existing oil and gas wells in the blocks. Any other work required for the efficient and successful execution of work shall be carried out by the Contractor except those enumerated under the obligation of the Company defined in para 15.0 below.

14.22 All claims for the loss or damage to standing crops, land or property, resulting from operations under the Contract will be borne and paid by the Contractor.

14.23 The main recording equipment should be housed in a properly insulated, air-conditioned cabin, mounted on a truck. The truck should be capable of moving in difficult terrains.

14.24 The camp site should preferably be within the operational area or close by. Security of camp etc. will be the responsibility of the Contractor.

14.25 All the field tapes / cartridges / hard discs of experimental data will be provided to Company at no extra cost.

14.26 Contractor shall arrange both lodging and boarding facilities for 3 Company Geophysicists / Representatives at any given time at no extra cost at each camp site during data acquisition phase. The camp facilities to the Company's representatives shall be at par with senior expatriate staff. The Contractor must provide adequate office space for the Company representatives involved during acquisition and experimental shooting phase. They also must provide PC, fax, telephone and internet facilities to OIL representatives at their office.

14.27 Contractor shall arrange at his cost two AC vehicles (4x4 wheel drive), during the entire contract period, equipped with VHF & UHF radio capable of receiving all the frequencies used by the seismic crew, exclusively for use of Company representatives in the field with driver, fuel, maintenance, repairs, etc. for seismic work supervision. The vehicles must have mobile radio to communicate with base camp or field sites.

14.28 The Contractor should ensure proper coupling of the Geophone/Hydrophone with ground during data acquisition. Any material required for obtaining proper coupling will be arranged by the contractor at its own cost.

14.29 The Contractor shall keep all the recorded magnetic data tapes in air-conditioned room, free from dust and hand over to the company approximately on monthly basis at Company's office at Libreville, Gabon.

14.30 The Contractor shall provide necessary safety cloth, appliance, etc. to all seismic field personnel engaged in above field operations and shall follow statutory norms applicable to such operations under Gabonese labour laws.

14.31 For recruitment of un-skilled/ skilled labours, the Contractor should ensure preference to local personnel from operational area and as per Gabonese laws.

14.32 The field time schedule for day-to-day operations will be mutually decided by Contractor and Company.

14.33 The Contractor shall ensure noise free spread as far as possible during the actual recording period.

14.34 The Contractor's representative shall maintain contact with Company's representative at recording site during the seismic operations and shall arrange for checking and subsequent replacement of bad cables/geophones. Contractor's representative shall also be available at base camp as and when needed.

14.35 The wooden pegs with marking should be available at the measured SP points and geophone/ ground stations at the time of recording along the particular seismic line.

14.36 The Contractor shall bring required number of specialized transport vehicles for crew & equipment movement to carry out seismic survey work, which shall be suitable for continuous use in the survey area.

14.37 The Contractor shall bring the adequate number of mechanized shot hole drilling rigs in perfect working condition, capable of drilling holes for Uphole survey work and for dynamite shooting in the forest covered hard formation areas of the Block.

14.38 The Contractor must comply strictly to necessary Health, Safety and Environment regulations of Gabon. The Contractor should meet the HSE standards of International geophysical industry.

14.39 Contractor should provide mobile fire tender at Camp site and other work site with all necessary arrangements to fight/extinguish fire.

15.0 Obligations of the Company:

15.1 The Company shall be responsible for Petroleum Exploration Licence (PEL) for carrying out survey.

15.2 The Company shall provide, if required, necessary documents, for clearance from Gabonese govt.

15.3 Company shall organize all possible help from local Government/ Administration to Bidder's personnel and equipment in case of natural disaster, civil disturbances and epidemics.

SECTION-VII

BID REJECTION CRITERIA (BRC) / BID EVALUATION CRITERIA (BEC)

A) BID REJECTION CRITERIA (BRC)

The bid shall conform generally to the specifications and terms and conditions given in this Bid document. Bid shall be rejected in case the services offered do not conform to required parameters stipulated in the technical specifications as given hereunder. Notwithstanding the general conformity of the bids to the stipulated specifications, the following requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and therefore will be rejected.

1.0 Technical

- 1.1 Bidder must have successfully completed 3D seismic surveys using dynamite as source with a cumulative total of over 1000 sq. km in the last 5 calendar years. Bidders are to provide a tabulation with the basic survey statistics for these surveys with supporting documentary evidence.
- 1.2 A Bid shall be rejected if personnel and equipment offered by bidder do not meet the requirement/experience of key personnel and vintage of equipment as mentioned in **Annexure-I & II** respectively.
- 1.3 The Bidder should be able to mobilize all the crew and equipment within 120 days from the date of notification of award of contract (Letter of Intent). The bid will be rejected, if bidder does not confirm this in writing.
- 1.4 The Bids shall be technically evaluated based on the minimum requirements given in **Section- IV** (Terms of Reference and Technical Specifications). The various equipments (software and hardware) should meet the minimum requirements and specifications given in the Bid Document, otherwise the bid will be rejected.
- 1.5 Bidder must fulfill all the criterion and statutory requirements such as health, safety, environment, labour laws etc. to provide seismic data acquisition services in Gabon as per the applicable Gabonese laws. The bidder shall take necessary approval from the concerned Gabonese authorities for the above.

2.0 Commercial

- 2.1 Bids are to be submitted AS PER Clause 13.0 of Section-II. Only the Commercial Bid should contain the quoted prices and rates. Non compliance of this will result in rejection of the Bid.
- 2.2 Bidders must quote in accordance with the price schedule outlined in **PRICE BID FORMAT** of tender document including **Annexure-I and Annexure-II**, otherwise the Bid will be rejected.
- 2.3 A Bid received through, or in the form of, a fax or email will be rejected.

- 2.4 Bid documents shall be typed and all pages of the original Bid shall be signed by the Bidder's authorized representative.
- 2.5 Any interlineations, erasures or overwriting in the Bids necessary to correct errors made by Bidder, shall be initialled by the Bidder's authorized representative. White fluid shall not be used for making corrections. A Bid not meeting these requirements shall be rejected.
- 2.6 Any Bid containing a false statement shall be rejected.
- 2.7 The Bid documents are not transferable. Offers received from unsolicited Bidders will be returned, unopened.
- 2.8 Offers made by Indian Agents on behalf of their overseas Principals will be rejected and returned unopened.
- 2.9 Any Bid received by Company after the deadline for submission of Bids prescribed herein will be rejected and returned unopened.
- 2.10 Prices and rates quoted by Bidders must be held firm during the term of the contract and not be subject to any variation. Bids with adjustable price terms will be rejected.
- 2.11 There must be no exception to the following Clauses including sub-clauses, otherwise the Bid will be rejected.
- Performance Security Clause
 - Tax liabilities Clause
 - Insurance Clause
 - Force Majeure Clause
 - Termination Clause
 - Arbitration Clause
 - Liability Clause
 - Withholding Clause
 - Applicable Law Clause
 - Obligation of Contractor Clause
- 2.12 The Bid documents are not transferable. Offers made by the bidders to whom the Bid documents were not issued by the Company will be rejected.

3.0 GENERAL

- 3.1 The compliance statement **Proforma-II** should be duly filled up. In case Bidder takes exception to any clause of tender document not covered under BEC/BRC, then the Company has the discretion to load or reject the offer on account of such exception if the Bidder does not withdraw/ modify the deviation when/as advised by Company. The loading so done by the Company will be final and binding on the Bidders. No deviation will however, be accepted in the clauses covered under BEC/BRC.
- 3.2 To ascertain the substantial responsiveness of the bid the Company reserves the right to ask the Bidder for clarification in respect of clauses covered under BRC/BEC also and such clarification fulfilling the BEC/BRC clauses in Toto must be received on or before the deadline given by the Company, failing which the offer will be summarily rejected.

- 3.3 If any of the clauses in the BEC/BRC contradict with other clauses of the Bid Document elsewhere, then the clauses in the BEC/BRC shall prevail.
- 3.4 Any exception or deviation to the tender requirements must be tabulated in Proforma 1 by the Bidder in the Technical Bid only. Any additional information, terms or conditions included in the sealed Commercial (Priced) Bid will not be considered by OIL for evaluation of the Tender.

B) BID EVALUATION CRITERIA

- 1.0 The bids conforming to the technical specifications, terms and conditions stipulated in the tender and considered to be responsive after subjecting to Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria.
- 2.0 The Bids shall be technically evaluated based on the minimum requirements given in **Section-IV (Terms of Reference and Technical Specifications)**. The various equipments (software and hardware) should meet the minimum requirement/ specification given in the Bid Document.
- 3.0 Commercial Bids shall be evaluated taking into account the summation of the following:
- a) Mobilization charges for 3D Seismic Crew (M)
 - b) Charges for fixing 40 reference points using relative static Differential Global Positioning System. (40xDG)-
 - c) Charges for 10 days 3D Experimental Survey (10xEX)
 - d) Charges for 100 Sq. Km of 3D Seismic Data Acquisition (100XSDAQ)
 - e) Stand-by charges for seismic data acquisition equipment with 3D crew for 10 days (10xSBWC)
 - f) Force-Majeure rate for 10 days (10xFM)
 - g) Demobilization Charges for 3D Seismic Crew (DM)

TOTAL ESTIMATED VALUE OF THE CONTRACT for the purpose of evaluation will be calculated as follows:

$$\text{Total Estimated Contract Value} = (M) + (40 \times DG) + (10 \times EX) + (100 \times SDAQ) + (10 \times SBWC) + (10 \times FM) + (DM)$$

Note: i) The items referred in above mentioned clauses are to be read in conjunction with **Section- V, Part-A on PRICE SCHEDULE**.

- ii) The quantum mentioned above is for bid evaluation purposes only. However, payment will be made as per actual.

- iii) All taxes, levies and custom duty will be borne by the Bidder.
- iv) The Bids in which the prices for any part the work for data acquisition given above, are not quoted, shall be rejected. However, if no charge is involved for any of the work, 'NIL' should be mentioned against such part of work.
- v) For evaluation of the bids, B.C Selling (market rate) of State Bank of India prevailing one day prior to the priced bid opening will be considered. Where the time lag between the price bid opening and final decision exceeds three months, the rate of exchange prevailing on the date prior to the date of final decision will be adopted for conversion in to single currency.

PROFORMA - I

LETTER OF AUTHORITY

To,

General Manager (Gabon Project)
Oil India Limited
La sabliere, Immueble FIDJI
(Pres la Cours Constitutionelle)
Libreville, BP 23134, Gabon

Sir,

Sub : OIL's Tender No. _____

We _____ confirm that Mr. _____ (Name and address) as authorized to represent us to Bid, negotiate and conclude the agreement on our behalf with you against Tender Invitation No. _____ for hiring of services for _____.

We confirm that we shall be bound by all and whatsoever our said representative shall commit.

Yours Faithfully,

Signature : _____
Name : _____
Designation : _____
For & on behalf of : _____

Note : This letter of authority shall be on printed letter head of the Bidder and shall be signed by a person competent and having the power of attorney (power of attorney shall be annexed) to bind such Bidder.

PROFORMA - II

STATEMENT OF COMPLIANCE WITH RESPECT TO BRC

SL. NO.	SECTION/ CLAUSE NO.	BRIEF STATEMENT	COMPLIANCE	REMARKS

We undertake that all the clauses of BRC as entered in the tender document shall be fully complied with.

Signature and seal of the Bidder :

Name of Bidder:

PROFORMA - IIa

STATEMENT OF NON-COMPLIANCE (EXCEPTING BRC)

SL. NO.	SECTION/ CLAUSE NO.	BRIEF STATEMENT	NONCOMPLIANCE	REMARKS

We undertake that excepting above deviations all the terms and conditions in the tender document shall be fully complied with.

Signature and seal of the Bidder :

Name of Bidder:

PROFORMA - II A

BID FORM

To
General Manager (Gabon Project)
Oil India Limited
La sabliere, Immueble FIDJI
(Pres la Cours Constitutionelle)
Libreville, BP 23134, Gabon

Sub : Tender No. : _____

Dear Sir,

Having examined the General and Special Conditions of Contract and the Terms of Reference including all attachments thereto, the receipt of which is hereby duly acknowledged, we the undersigned offer to perform the services in conformity with the said conditions of Contract and Terms of Reference for the sums stated below against each work as defined or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

Sl. No.	Subject	Total Bid Amount	
		Rupees in word	Rupees in figure
1			

We undertake, if our Bid is accepted, to commence the work within (.....) days calculated from the date of issue of Company's LOA.

If our Bid is accepted, we will obtain the guarantee of a bank in a sum not exceeding _____ for the due performance of the Contract.

We agree to abide by this Bid for a period of 180 days from the date fixed for Bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof in your notification of award shall constitute a binding Contract between us.

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

Dated this _____ day of _____ 20__.

Signature and seal of the Bidder : _____
(In the capacity of) : _____
Name of Bidder : _____

PROFORMA -II B

FORM OF PERFORMANCE BANK GUARANTEE

To: General Manager (Gabon Project)
Oil India Limited
La sabliere, Immueble FIDJI
(Pres la Cours Constitutionelle)
Libreville, BP 23134, Gabon

WHEREAS _____(Name and address of Contractor) (hereinafter called "Contractor") had undertaken, in pursuance of Contract No. _____ to execute (Name of Contract and Brief Description of the Work) _____ (hereinafter called "The Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee as security for compliance with Contractor's obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee; NOW THEREFORE we hereby affirm that we are Guarantors on behalf of the Contractor, up to a total amount of (Amount of Guarantee in figure) Rs. _____ (Amount of Guarantee in word _____), such amount being payable in the types and proportions of currencies in which the Contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of guarantee sum as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein. We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or the work to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way cease us from any liability under this guarantee, and we hereby waive notice of such change, addition or modification.

This guarantee is valid until the date _____ (calculated at 6 months after Contract completion date).

SIGNATURE AND SEAL OF THE GUARANTORS: _____

Designation : _____

Name of Bank : _____

Address : _____

Witness : _____

Address : _____

Date : _____

Place : _____

PROFORMA – IIC

CONTRACT FORM

This Contract is made on ____ day of _____ between Oil India Limited, a Government of India Enterprise, incorporated under the Companies Act 1956, having its registered office at Duliajan in the State of Assam, hereinafter called the "Company" which expression unless repugnant to the context shall include executors, administrators and assignees on the one part, and M/s. _____(Name and address of Contractor), hereinafter called the "Contractor" which expression unless repugnant to the context shall include executors, administrators and assignees on the other part,

WHEREAS the Company desires that services _____ (brief description of services) should be provided by the Contractor as detailed hereinafter or as Company may requires;

WHEREAS, Contractor engaged themselves in the business of offering such services represents that they have adequate resources and equipment, _____ material etc. in good working order and fully trained personnel capable of _____ efficiently undertaking the operations and is ready, willing and able to carry out the said services for the Company as per Section- ____ attached herewith for this purpose and

WHEREAS, Company issued a firm Letter of Award (LOA) No. _____ based on Offer No. _____ submitted by the Contractor against Company's Tender No. _____ and Contractor accepted Company's LOA vide their letter No. _____. All these aforesaid documents shall be deemed to form and be read and construed as part of this contract. However, should there be any dispute arising out of interpretation of this contract in regard to the terms and conditions _____ with those mentioned in Company's tender document and subsequent _____ letters including the Letter of Award and Contractor's offer and their _____ subsequent letters, the terms and conditions attached hereto shall prevail. Changes, additions or deletions to the terms of the contract shall be authorised solely by an amendment to the contract executed in the same manner as this contract.

NOW WHEREAS, in consideration of the mutual covenants and agreements hereinafter contained, it is hereby agreed as follows -

1. In this Contract words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract referred to.
2. In addition to documents hereinabove, the following Sections and Annexures attached herewith shall be deemed to form and be read and construed as part of this Contract viz.:
 - (a) Section-III indicating the General Conditions of the Contract
 - (b) Section-IV indicating the Terms of Reference / Technical Specifications;

(c) Section-V indicating the Schedule of Rates.

(d) Section-VI indicating the Special Conditions of the Contract.

3. In consideration of the payments to be made by the Company to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Company to provide the Services and to remedy defects therein in conformity in all respect with the provisions of this Contract.
4. The Company hereby covenants to pay the Contractor in consideration of the provision of the Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of this Contract at the times and in the manner prescribed by this Contract.

IN WITNESS thereof, each party has executed this contract at ----- as of the date shown above.

Signed, Sealed and Delivered,

For and on behalf of
Company (Oil India Limited)

_____)

Name :

Status :

In presence of

1.

2.

For and on behalf of
Contractor
(M/s.

Name :

Status :

In presence of

1.

2.

PROFORMA - II D

FORM OF BID SECURITY (BANK GUARANTEE)

To : General Manager (Gabon Project)
Oil India Limited
La sabliere, Immueble FIDJI
(Pres la Cours Constitutionelle)
Libreville, BP 23134, Gabon

WHEREAS, (Name of Bidder) _____ (hereinafter called "the Bidder") has submitted their offer Dated _____ for the provision of certain oilfield services (hereinafter called "the Bid") against OIL INDIA LIMITED, Duliajan, Assam, India (hereinafter called the Company)'s tender No. : _____. KNOW ALL MEN BY these presents that we (Name of Bank) _____ of (Name of Country) _____ having our registered office at _____ (hereinafter called "Bank") are bound unto the Company in the sum of (*) for which payment well and truly to be made to Company, the Bank binds itself, its successors and assignees by these presents. SEALED with the common seal of the said Bank this _____ day of _____ 20__.

THE CONDITIONS of this obligations are :

- (1) If the Bidder withdraws/modifies their Bid during the period of Bid validity specified by the Bidder; or
- (2) If the Bidder, having been notified of acceptance of their Bid by the Company during the period of Bid validity:
 - (a) Fails or refuses to execute the form of agreement in accordance with the Instructions to Bidders; or
 - (b) Fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

We undertake to pay to Company up to the above amount upon receipt of its first written demand (by way of letter / fax/cable), without Company having to substantiate its demand provided that in its demand Company will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including the date (**)

and any demand in respect thereof should reach the Bank not later than the above date.

SIGNATURE AND SEAL OF THE GUARANTORS : _____

Name of Bank & Address : _____

Witness: _____

Address : _____

(Signature, Name and Address)

Date : _____ Place : _____

* The Bidder should insert the amount of the guarantee in words and figures.

** Date of expiry of Bank Guarantee should be minimum 30 days after the end of the validity period of the Bid.

ANNEXURE-I

LIST OF KEY PERSONNEL TO BE DEPLOYED BY BIDDER

1. Key Personnel

The following positions shall be filled on the crew at all times during the period of the survey.

<u>POSITION</u>	<u>WORK EXPERIENCE</u>	<u>NUMBER OF PERSONNEL</u>
Party Manager	15 years	1
Party Chief	10 years	1
Administrator	05 years	1
HSE Adviser	10 years	1
Doctor	10 years	1
Paramedics	05 years	1
Line Clearance Supervisor	05 years	1
Chief Surveyor	10 years	1
Senior Surveyors	05 years	2
Senior Observer	05 years	2
Senior Driller	10 years	1
Driller	07 years	1
Senior Seismologist	05 years	1
Processing Geophysicist	05 years	2

Bidder shall provide a list of names and curriculum vitae of the above key personnel. Personnel nominated to fill these positions shall be subject to approval and shall not be replaced or transferred without prior notification to company. Bidder must submit the detailed bio-data of key personnel with the technical bids.

2. Other Technical Personnel

To be specified by the Bidder. Inexperienced personnel shall not be acceptable. All technical personnel provided under this heading must have had adequate training with the particular equipment they shall be required to operate.

3. HSE Training

All technical field based personnel shall undergo general and job-specific HSE training prior to commencement of the work. The HSE Adviser shall maintain records of training.

Note: The above lists indicate the minimum requirement of key personnel and their experience. The contractor may choose other personnel e.g. observers, surveyors, mechanics, processing geophysicist etc., which the contractor would like to deploy to accomplish the job as per the defined parameter and time frame. The detailed bio-data of key personnel must be submitted with the technical bids. The radio operators, etc. must have valid licenses as applicable for operating in Gabon. The Supervisor and Party Chief have to be efficient enough to coordinate with Company and perform all other required interaction with external agencies for executing the job successfully. The contractor’s key personnel must be proficient and fluent in English.

EQUIPMENT AND ACCESSORIES

3-D SEISMIC DATA ACQUISITION

The quantity and the type of equipment to be deployed for carrying out the survey must conform to the latest industry standards and should have the minimum vintage, features and capabilities as described below:

DESCRIPTION

A. SURVEY SYSTEM

Contractor shall provide and employ Global Positioning System (GPS)/ Differential Global Positioning System (DGPS) survey equipment and techniques. The Global Positioning System/ Differential Global Positioning System proposed for the work shall provide positioning in an efficient and fully quality controlled manner which meets the international industry standards & the tolerances.

The contractor shall detail full specifications of the surveying equipment it proposes to furnish for the survey work. The survey equipments, systems should not be older than 3 years on the bid closing date. Surveying equipment shall comprise, but not limited to, the following equipment and systems:

- Required number of Differential Global Positioning Systems (DGPS) capable of operating in L1 & L2 modes to establish a network of positioning control points/ reference points.
- Global Positioning System capable of operating in both static and Real-Time Kinematic positioning modes (RTK GPS) for the positioning of seismic source and receiver locations accurately.
- Adequate no. of electronic Total stations, handheld GPS etc. for survey work.
- Any other ancillary equipment to be provided, e.g. VHF repeater stations.
- Pre-plan, Computation, Quality Control & Mapping Hardware and Software
- Adequate PC's accessories, consumables, systems hardware/ software, etc. that will be required to carry out survey in proper time frame. Apart from this, other necessary survey equipment such as hand compasses etc. should also be deployed.
- Contractor shall at all times provide and maintain sufficient spares and back-up equipment so that the efficiency of the work is not impaired.

B. SEISMIC RECORDING SYSTEM

Latest state-of-the-art technology data acquisition system of vintage not exceeding 3 years on the bid closing date having the following features:

- Having 24 bit recording facility with DELTA SIGMA technology i.e.SN408 or SN428, I/O Image, Aram Aries or equivalent to be deployed ;
- Capable of handling minimum 2880 channels per record with 2 ms sampling interval for 3D Seismic data acquisition(with adequate field electronics for field to be laid so that the Tendered quantum of work can be completed in scheduled time);
- The necessary field units, radio blasters, cables, power supply systems and low distortion marsh geophones (distortion less than and equal to 0.1 percent, with steel/brass spikes, housed in water-proof cases with 5m connecting lead wire and compatible with 24-bit recording facility using the delta-sigma technology) should also be catered for.
- The Contractor must bring in adequate number of accessories such as oscilloscopes, multimeters, PC based repair stations etc.
- Contractor should also bring adequate no. of hydrophones (compatible with recording equipment of delta-sigma technology);
- **The cables and geophones should not be more than one year old as on bid closing date.**
- The field units should not be more than **3 years** vintage as on bid closing date.
- All the above equipment must be in perfect working condition.

BULLDOZERS

Bulldozers should be in perfect working condition.

B. EQUIPMENT FOR LVL/UPHOLE SURVEYS

LVL/ Uphole survey equipment should be of vintage not exceeding 3 years as on the bid closing date and having the following features must be brought:

1. Latest recording equipment for LVL survey
2. Refraction geophones 4.5 Hz and spread upto 160m length, 24 takeouts, reversible cable.
3. Up-hole Survey Recording Equipment
4. Mobile rigs in perfect working condition – minimum 1 no. capable of drilling hole of minimum 100 metres in hard formation covered by forest and thick vegetation.
5. Water tank sufficient nos. to support drilling rigs mounted on 4X4 truck.
6. Energy Source – Dynamite, Weight drop type, mechanically lifted, truck mounted.
7. Software for LVL/ UPHOLE data analysis & interpretation and any other equipment/ accessories required for LVL/ UPHOLE surveys shall be included.

D. ENERGY SOURCE

Contractor will have to use explosives as energy source for data acquisition in land / marshy land/swamps, thick forests etc. Bidder must ensure the following geophysical requirements:

- a) Adequate energy to image target horizons.
- b) Proper source coupling.
- c) For explosive sources, shot-hole depth is to be maintained at a minimum of 10 mts. If the energy penetration is not proper, Shot hole depth has to be increased between 15 to 18m.
- d) Bidder shall deploy suitable shot hole drilling rigs and technology to drill the shot holes on the land and boulder covered areas and shallow water areas.
- e) Bidder shall also deploy suitable vehicles, boats, floating devices etc to drill shot holes in shallow water/swampy/marshy / boulder covered areas.
- f) Near field source signature must be recorded for subsequent use during data processing.

E. RECEIVERS

Bidder will have option to use receivers such as normal geophones, marsh geophones or Hydrophones in any combination depending on the logistics and terrain conditions. In case of geophones, minimum 12 geophones / group might be required. However, the contractor has to provide the exact number of geophones / group on the basis of experimental survey. In case of hydrophones, requisite number of hydrophones/ station needs to be deployed this has to be decided after experimental survey. In regard to receiver type, sensitivity & array, contractor must maintain the followings up to the satisfaction of OIL

- a) All the receivers must be compatible to 24 bit recording for high bandwidth signal recording necessary to resolve the thin reservoirs as discussed above.
- b) Proper receiver coupling (tightly planted buried geophones/ flushed hydrophones at the river bottom).
- c) Array of receivers will be decided after field tests & noise analysis for recording data with high S/N ratio.
- d) All hydrophones must be equipped with suitable positioning system to accurately position the hydrophones in water within a tolerance of < 3 meters from the planned position.

F. COMPUTING FACILITY

Stand-alone Systems in perfect working condition with adequate accessories, consumables etc. for following services :

-3D field management/planning with complete survey simulation package, attribute analysis e.g. offset etc including ray tracing

-Construction of surface geological model for field statics with LVL/ Uphole data processing & interpretation (including tomography based interpretation)

-Topographic Survey data management & processing

-3D Seismic data processing system to provide both quality control and preliminary data processing functions. It is envisaged that the field data processing will provide the following products and services:

- I. Shot data analysis
- II. Field tape copying
- III. Brute stack of each line
- IV. Final shot/receiver geometry quality control.
- V. Final field data tapes with spread geometry, trace edits and field statics in the headers, ready for input into the final 3D data processing sequence

The processing sequence for the 'Brute Stack' shall include, but not limited to, Amplitude recovery, Deconvolution, Velocity analysis, Elevation static application, NMO correction, Stacking, FX Deconvolution and Scaling etc..

The Systems need to be connected to colour plotter, printers and 3592 E Exabyte /DVD / DLT cartridge drive for back-ups and any other facilities required to control the quality of survey and to provide the technical inputs required by Company.

All the above equipment should be of vintage not exceeding 3 years as on the bid closing date.

G. COMMUNICATION EQUIPMENT

The Bidder shall detail the radio equipment to be used for field communications and also for contact with the operations base. The contractor shall provide communications facilities in the Base Camp suitable for the work. This equipment might be SSB HF radio, VHF radio or satellite phones.

All work groups to be in radio communication with each other and/or base camp VHF repeater station(s) may be required. Alternatively satellite phones may be used.

Contractor shall provide and maintain suitable equipment to ensure that instant communication is available between its field base camp and its Libreville facility. This equipment shall, as a minimum, be SSB HF radios, located at the facilities. Alternatively satellite phones may be used.

The contractor shall equip the Company Representative's vehicles with both VHF and UHF transceiver capable of communicating between the survey area and base camp and receiving all VHF frequencies used by the crew.

H. TRANSPORT

The contractor shall bring all the required specialized transport vehicles for crew & equipment movement to carry out seismic survey in the area located south east of Libreville, Gabon. The Bidder shall detail full specifications of the vehicles it proposes to furnish for the work, which shall be suitable for continuous use in the survey area.

Contractor shall provide an adequate quantity of vehicles to carry out the work in an efficient, effective and safe manner. Vehicles used for bulk transportation of personnel shall be equipped with suitable shading and an adequate supply of drinking water for all occupants.

Contractor shall supply one vehicle exclusively for use as a field ambulance. This vehicle shall be equipped with supplies and facilities to deal with a minimum of one trauma case and shall have SSB and VHF radios fitted, along with a hand held GPS unit.

Two 4 x 4 good light AC fitted vehicles shall be available for the exclusive use of Company's Representatives in the survey area.

Company recommends that all field vehicles are fitted with suitable radio communication equipment and GPS units.

I. PORTABLE MECHANIZED SHOT HOLE DRILLING RIGS

The contractor shall bring the adequate number of mechanized shot hole drilling rigs in perfect working condition, capable of drilling holes (for loading dynamite as source) minimum up to 20 Meters in the hard formation covered by forest and thick vegetation of the Block.

Contractor should deploy adequate number of Licensed Shot Firers for Seismic Data Acquisition since dynamite will be used as source.

ANNEXURE III

MOBILISATION

**ESTIMATED VALUE OF EQUIPMENT, TRANSPORT, ACCESSORIES,
SPARES & CONSUMABLES ON DATE OF ENTRY INTO GABON**

SL.NO	ITEMS	QUANTITY	VINTAGE	CIF VALUE			TOT
				ESTIMATED ACTUAL COST	INSURANCE	FREIGHT FROM PORT OF EXIT	

(Authorised Signatory)
Company_____

List of Equipment

A. Recording Equipment and Accessories

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

B. Geophones/Hydrophones/Cables/Station Units

Sl. No.	Item	Quantity	Model & Make	Year of Manufacture

C. Communication Sets (for base camp, vehicles and hand set for surveys)

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

D. Spares and Consumables

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

E. Maintenance Equipment

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

F. Survey Equipment including GPS, Processing System for Seismic Data & Survey Data

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

G. Computing Equipment for Processing of 3d Seismic Data

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

H. LVL & Up-hole Survey Equipment

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

I. Transport Vehicles

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

J. BULLDOZER

Sl . No.	Item	Quantity	Model & Make

K. PORTABLE MECHANIZED SHOT HOLE DRILLING RIGS

Sl . No.	Item	Quantity	Model & Make	Year of Manufacture

QUESTIONNAIRE ON EXPERIENCE, EXPERTISE, HARDWARE/SOFTWARE ETC.

EXPERIENCE/ EXPERTISE

QUESTION NO.1: Describe the major projects for acquisition of 3D seismic data executed during the last 5(Five) years giving the following information for each project:

- a. Name of the Client Company, address, fax no., telephone no. and name of the contact person.
- b. Place where the project was executed.
- c. Starting and completion date of the project.
- d. Total Sq.Km acquired in the project.
- e. Documentary evidence in the form of satisfactory performance certificate from the client must be enclosed.**

QUESTION NO.2: Do you have any 3D acquisition projects currently in progress? If yes, specify the following:

- a. Client's name.
- b. Client's address.
- c. Fax/telephone no. /name of the contact person.
- d. Volume of the project in terms of Sq.Km
- e. Expected date of completion of the project.

QUESTION NO.3: Describe the acquisition system which will be utilized for the acquisition of 3-D seismic data.

QUESTION NO.4: Provide names, qualification and experience of all relevant key personnel (**as per Annexure-I, Section VII**) who will be executing the project.

GEOLOGICAL MAP OF BLOCK SHAKTHI AND ADJOINING AREA(figure-2)

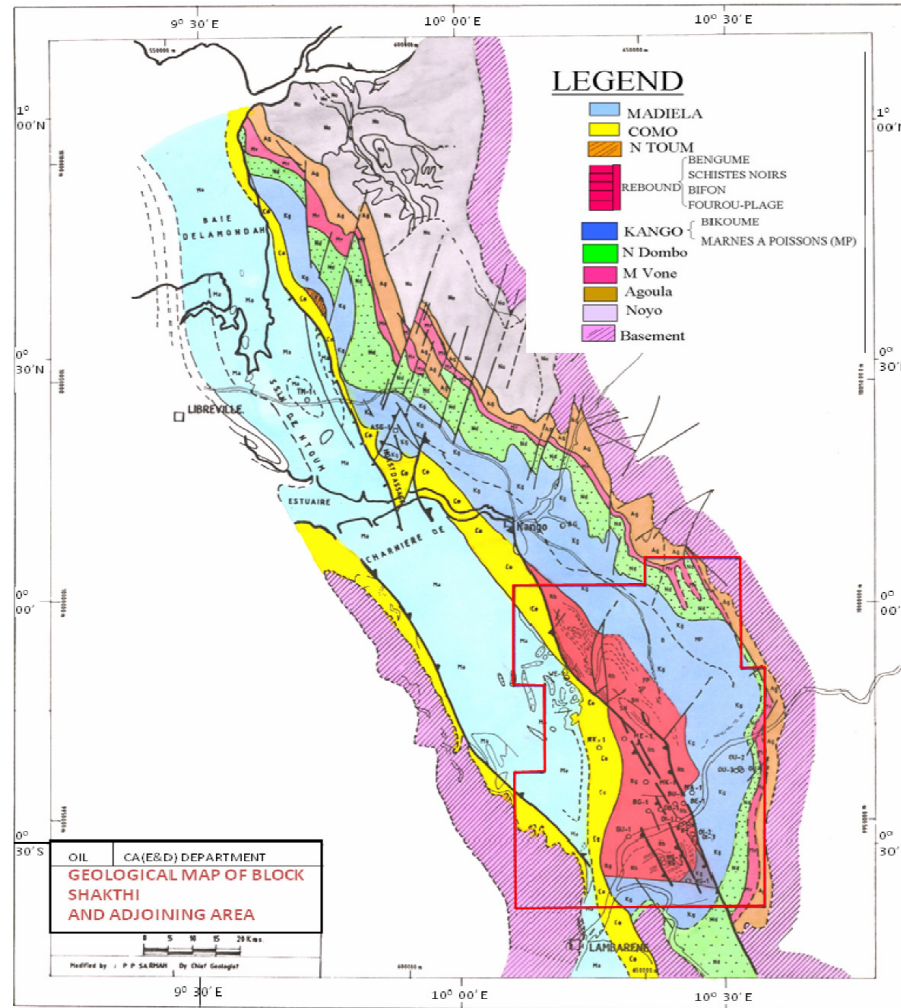
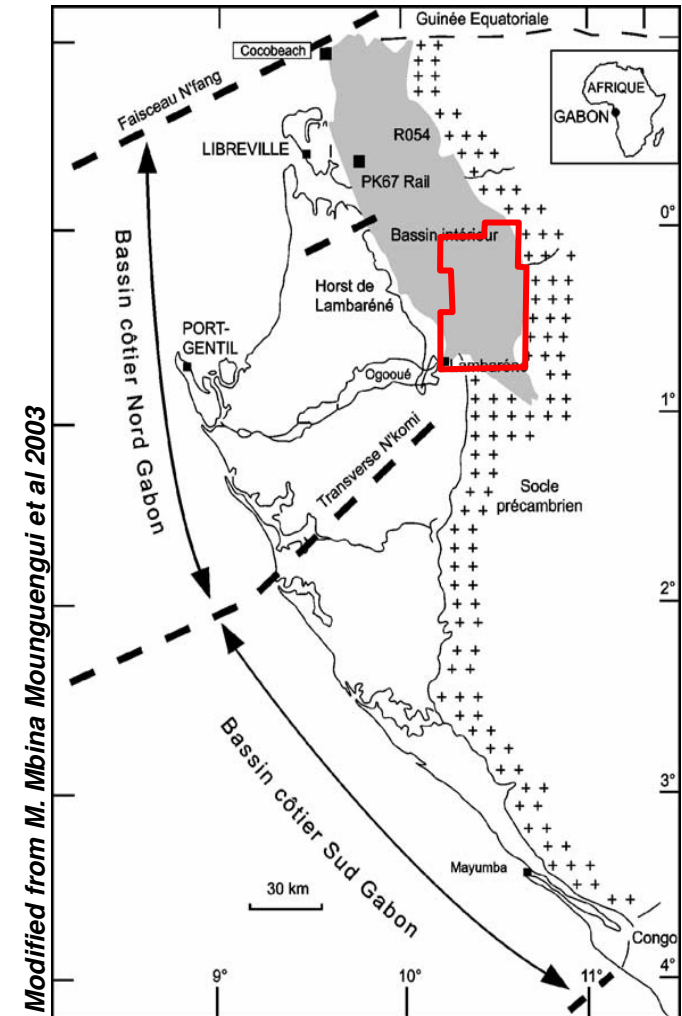
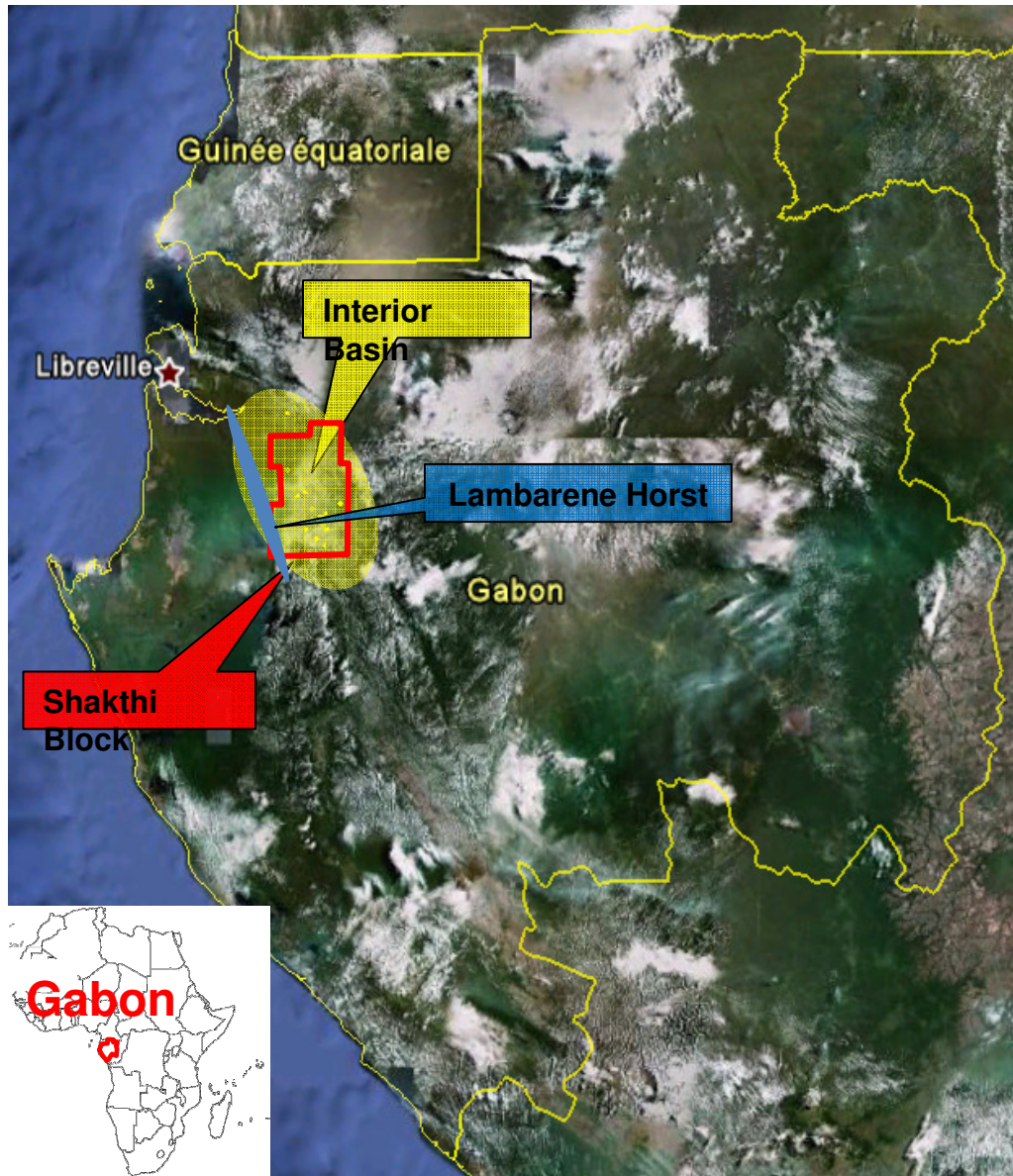


Fig.2: Geological map of block Shakthi and adjoining area



MAP OF SHAKTHI BLOCK (Figure-1)



Project Area - Shakthi Block:
 $\pm 3800 \text{Km}^2$

**LIST OF PARTIES
TO TENDER NO. OIL/62/7/ENQ-459**

THROUGH COURIER SERVICES

cc : Against Sl. Nos. 1, 3, 4 & 7 through normal Post

Sl. No.	Name & Address of the Party
1.	<p>M/s. CGG Veritas Services 1, rue Léon Migaux 91341 Massy Cedex <u>FRANCE</u></p> <p>Tel: +33 1 64 47 30 00</p> <p>cc : M/s. CGGVeritas - Base SATRAM nouveau port Port-Gentil, <u>GABON</u></p> <p>Tel : + (241) 07 60 17 17</p>
2.	<p>M/s. BGP Inc., China National Petroleum Corporation No.189 Fanyang Xi Road, Zhuozhou City, Baoding, Hebei Province, <u>P. R. CHINA (P.O.Box 11,072751)</u></p> <p>Tel : +86 13832260572</p>
3.	<p>M/s. LGC Geophysical Exploration Company of LPEB, CNPC No.161 Taishan Road. Panjin City, Liaoning Province, P. R. CHINA (P.O. Box 124010)</p> <p>cc : Geophysical Exploration Company of LPEB (L.G.C.Gabon) B.P 3253, Libreville <u>GABON</u></p> <p>Tel : + (241)07 04 2773</p>
4.	<p>M/s. SINOPEC International Petroleum Exploration & Production Corporation No. 263 Beishihuan Road Beijing <u>P.R.CHINA 100083</u></p> <p>Tel : +86 13813155177 +24107431027</p>

	<p>cc : SINOPEC International Petroleum Service Corp. Gabon Branch BP 2848, PORT-Gentil (Gabon) <u>G A B O N</u></p> <p>Tel (241) 07 52 39 64</p>
5.	<p>M/s. Western Geco Ltd. Schlumberger House Buckingham Gate, Gatwick Airport West Sussex, RH6 0NZ <u>U. K</u></p> <p>Tel : 44 12 9355655</p>
6.	<p>M/s. Petroleum Geo-Services ASA Strandveien 4 PO. BOX 89 N-1326 Lysaker <u>N O R W A Y</u></p> <p>Tel : +47 67 52 64 00</p>
7.	<p>M/s. GEOFIZYKA TORUN sp zoo Ul chrobrego 50 87-100 Torun <u>P O L A N D</u></p> <p>Tel : 48 (56)6593101</p> <p>cc : Mr. Suresh Sharma 30, South Park Apartments, Kalkaji, <u>NEW DELHI-110 019</u></p> <p>Tel.: +91 (0) 11 4059 0084</p>

GABON 3D SEISMIC SURVEY: DGH APPROVED SERVICE PROVIDER :

1) CGG Veritas :

CGGVeritas – Base SATRAM nouveau port
Port-Gentil,
Gabon
Atten :Mr Gerald Tuminaro
+ (241) 07 60 17 17
gerald.tuminaro@cggveritas.com
juan.manuel.rodriquez@cggveritas.com
CGGVeritas Services
1, rue Léon Migaux
91341 Massy Cedex
FRANCE
Tel: +33 1 64 47 30 00
Fax: +33 1 64 47 39 70

2) BGP International :

BGP Inc., China National Petroleum Corporation
Add : No.189 Fanyang Xi Road,Zhuozhou City,Baoding,Hebei
Province,P.R.China(P.O.Box 11,072751)
Website:<http://www.bgp.com.cn>
Attn : Mr. Bi Xinwen (Chief of BGP Bidding Department)
Email : bixinwen@bgpintl.com
Tel : +86 13832260572

3) Geophysical Exploration Company of LPEB(LGC)

LGC Geophysical Exploration Company of LPEB, CNPC
Add: No.161 Taishan Road. Panjin City, Liaoning Province, P. R. China (P.O. Box 124010)
Attn: Mr. Gao Haiyan (Manager of LGC International Department)
Email- guojibu@cnpc.com.cn
Geophysical Exploration Company of LPEB (L.G.C.Gabon)
B.P 3253,Libreville
Gabon
lh_kongfanxing@cnpc.com.cn
lh_yuf@cnpc.com.cn
Tel+ (241)07 04 2773

**4) SIPSC :SINOPEC INTERNATIONAL PETROLEUM CORPORATION
SINOPEC International Petroleum Exploration & Production Corporation**

**Add:No. 263 Beishihuan Road
Beijing P.R.CHINA,100083**
+86 13813155177
+24107431027
Fax +241443510
Atten Mr Jian Wang
jianwang@sipc.cn

SINOPEC International Petroleum Service Corp. Gabon Branch
General Manager (Mr Zeng Xiaoyang)
BP 2848,PORT-Gentil (Gabon)
GABON
Tel (241) 07 52 39 64
Fax: (241)564597
sipsc@sipsc.com
billzeng2004@yahoo.com

5) Western Geco

Western Geco, Ltd.
Schlumberger House
Buckingham Gate, Gatwick Airport
West Sussex, RH6 0NZ
UK
Tel 44 12 9355655
Fax 4412 93556300
Mr Henning Berg

6) PGS Onshore

Petroleum Geo-Services ASA
Strandveien 4
PO.BOX 89
N-1326 Lysaker
NORWAY
Phone: +47 67 52 64 00
Fax: +47 67 52 64 64

7) Geophysica Torun :

GEOFIZYKA TORUN sp zoo
Ul chrobrego 50 87-100
Torun
POLAND
Tel 48 (56)6593101
Fax 48(56)6231664
office@GTservices.pl
Mr Suresh Sharma
30, South Park Apartments,
Kalkaji,
New Delhi 110 019, India
tel.: +91 (0) 11 4059 0084
fax: +91 (0) 11 4059 0400
india@GTseVICES.pl