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INVITATION FOR EXPRESSION OF INTEREST (EOI)

FOR

HIRING OF CEMENTING SERVICES FOR EXPLORATORY DRILLING IN NELP-VI BLOCK (MZ-ONN-2004/1) IN THE STATE OF MIZORAM, INDIA

(EOI NOTICE NO.: OIL/NEF/GLOBAL/EOI/031/2016)

OIL INDIA LIMITED (OIL), a Government of India Enterprise under the Ministry of Petroleum and Natural Gas, is a premier up-stream Oil Company engaged in the business of Exploration, Production & Transportation of Crude Oil & Natural Gas as well as production of LPG, having its Headquarter at Duliajan, Assam in India. Its operations are largely based in the north-eastern parts of India particularly in Mizoram, Assam and Arunachal Pradesh, but have also extended its activities in different parts of India and abroad. In connection with its ongoing exploration activities in the State of Mizoram, OIL's NEF Project invites Expression of Interests (EOIs) from reputed and established E&P Service Providers/Vendors meeting the pre-qualification criteria as mentioned below for empanelment/short listing and issue of tender document for providing complete **Cementing Services** including deployment of manpower, Cementing Unit, other surface equipment and supply of oil well cement & additives etc. for drilling of exploratory wells in NELP-VI block: MZ-ONN-2004/1. The period of contract would be initially for one year, with a provision for extension by one more year on same rates, terms and conditions at the option of Company.

1.0 PROJECT INFORMATION:

- 1.1 As per committed Minimum Work Programme (MWP) for the NELP-VI Block (MZ-ONN-2004/1) Oil India Ltd. (OIL), being the Operator, has to drill five (5) exploratory wells within stipulated time frame. Company has deployed one 2000 HP capacity Drilling Rig Package on chartered hire basis. So far, one exploratory well has already been completed in the block and drilling of the second well will commence soon.
- 1.2 Mizoram has the most variegated hilly terrain in the eastern part of India with 21 hill ranges of different altitudes (maximum altitude of around 1800 m and in general 900 m to 1200 m) with succession of long valleys running mostly from North to South covering the entire state. The hills are very steep and rugged with intervening deep gorges. Two major roads namely NH-54 and State Highway funded by World Bank run almost parallel to each other in North-Southern direction through the centre of the state as well as OIL's NELP block. Both the roads emanate from Aizawl and converge at Lunglei, the second largest town in Mizoram after Aizawl. These two highways will serve as the major feeders for any drilling locations within the NELP block. The roads are in hilly terrain full of sharp curves with steep gradient. The other connecting roads are narrow having sharp horizontal curves with steep gradient in many places.

1.3 Like all other states in North east India, Mizoram also experiences heavy rain during Monsoon which sets early i.e. from May onward. The average annual rainfall is 250 cm. Pre Monsoon showers are also frequent. During the period of monsoon there is frequent heavy rains resulting landslides with temporarily disruption of the road communication system. The summer is hot and humid and maximum temperature ranges from 30 to 34 degree centigrade during April to June. The winter is from November to January when the temperature is 12 to 25 degree centigrade.

2.0 GEOLOGY OF THE AREA:

2.1 Assam - Arakan region, Mizoram, Manipur and Tripura have drawn the attention of exploration geologists ever since the discovery of Digboi and Makum oil fields of Upper Assam around 1890. The Badarpur oil field in Cachar district of Assam, presently abandoned, was discovered in 1901. This discovery followed a spate of other discoveries in Assam since Sixties of the last Century. Gas occurrence in Tripura is very relevant to the exploration of the region. Commercial gas in this state was discovered during the late seventies of previous century within the Surma sequence of Miocene age. Several other gas fields have also been found since then.

2.2 Cachar-Tripura-Mizoram fold belt constitutes a distinct part of Assam-Arakan tectonic system. Myanmar’s Shan Plateau and the Ophiolite complex extend to the east of it. The Bangladesh flood plains are to the west. The Naga Schuppen belt of Assam forms the northern extreme and Chittagong hill track (Bangladesh) lies to the south of it.

2.3 The area of operation is a part of Tripura-Cachar-Mizoram fold belt of Assam Arakan Basin. The Mizoram fold belt is composed of tight linear folds with their axes almost in north-south direction. The intensity of folding increases from west to east where the rocks of Indian plate sub-ducted below the Burmese plate. The anticlines are long, narrow and tight, whereas the synclines are broad and gentle. As per the geological section of the area of operation, the area has Tipam formation exposed in the central part and Bokabil formation is exposed in the eastern and western part. The Bhuban formation is divided in three formations as Lower, Middle and Upper Bhuban formations. Lower Bhuban formation is mainly alternations of sandstones and shale. The Middle Bhuban consists of mainly shale with subordinate sandstones. The Upper Bhuban consists of alternations of sandstones and shales.

3.0 LOCATION OF THE AREA:

The block: MZ-ONN-2004/1 is situated in the Mizoram state in India and covers an area of 3213 sq. km. Aizawl is the Capital town of Mizoram and is connected to the other places by motorable roads and highways. The nearest railhead is at Bhairabi close to the border with Cachar district of Assam. Aizawl is linked by air to the rest of India, the nearest international airport being located at Kolkata in West Bengal. The proposed area lies in between the following broad coordinates:

Coordinates of Block MZ-ONN-2004/1

Points	Latitude (N)			Longitude (E)		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.
A	23	40	00	92	32	54.85
B	23	00	00	92	35	58
C	23	00	00	93	00	00
D	23	40	00	93	00	00
A	23	40	00	92	32	54.85

4.0 BRIEF SCOPE OF WORK:

- 4.1 OIL intend to hire the expert services with tools, equipment & consumables of Cementing Services for cementing of different size casings at different stages to different depths for a period of 1 (one) year (with a provision for further extension) in NELP-VI Block (MZ-ONN-2004/1) in Mizoram, India. The wells (depths ranging from 4000m to 5500m) are being drilled with the help of a 2000 HP Drilling Rig, in fold belt area and hilly mountainous terrain involving difficult logistics.
- 4.2 The Contractor shall be required to provide:
- a) One (1) self driven or trailer mounted twin pump high pressure Cementing Unit in perfectly working condition and complete with all accessories including pipe fittings and Batch Mixer(s) as required for oil/gas well cementation operations.
 - b) Bulk facilities inclusive of pneumatic & transport silos with all required accessories such as air compressor, cutting battles, air dryer, dust collector, etc. Space will be provided at well site for temporary placing the vertical silos (rocket silos) only for storing cement for cementation jobs.
 - c) Qualified, experienced and efficient personnel to operate and maintain the aforesaid Unit at Company's drilling site as and when required for well cementation jobs.
 - d) All consumables required for cementing operations including supply of API Class-G oil well cement, various additives and floating & guiding equipments.
- 4.3 The scope of work involves details of services to be performed by the Contractor, details of Tools / Equipment & personnel to be provided by the Contractor. However quantum of job may vary depending upon drilling activities to be taken up by the Company during the course of the contract and to be executed by the Contractor accordingly. The Contractor, following mobilization of crew and equipment at site, will be required to provide the intended services as desired by the Company in line with the contractual terms.

5.0 DETAILS OF SERVICES TO BE PROVIDED BY THE CONTRACTOR:

The Contractor is required to provide services highlighted hereunder but not limited to:

- i) Provide Slurry Design, Cementing Programme & Casing Stand-off Programme (centralizers placement programme).
- ii) To carry out relevant API and other necessary tests on cement and additives in their laboratory for preparation of suitable cement recipe for each and every cementing jobs.
- iii) To collect well-site water samples for sending it to their laboratory for testing and slurry design purpose.
- iv) To design appropriate slurry for the job.
- v) To collect slurry samples in briquettes prior and during pumping the slurry @ one sample per 20 bbls for recording setting time and hardness testing (to be conducted at their laboratory) as per API recommended practice.
- vi) Carry out Primary Cementing jobs

- vii) Carry out Two stage cementing jobs (if required)
- viii) To carry out Liner cementing jobs
- ix) To carry out secondary cementing jobs, if required.
- x) To carry out annulus top up job, if required
- xi) To carry out isolation repairing job, if required
- xii) To perform squeeze job, if required, using cement retainer (Contractor to provide the cement retainers suitable for 7" x 29 ppf and 5½" x 20 ppf casings respectively).
- xiii) To seal-off "Loss Circulation Zone" using loss circulation materials and placing cement, barites, bentonite-diesel-gunk plug. Requisite Barytes, Bentonite and Diesel for this purpose will be provided by Company (OIL) free of cost.
- xiv) To carry out cement Plug jobs through drill pipe / tubing
- xv) To assist in carrying out well head test/BOP tests/LOT/PIT (if required).
- xvi) To carry out Casing integrity Test.
- xvii) To maintain and service all tools / equipment belonging to Contractor and thus avoid downtime.
- xviii) To supply entire requirement of API class G cement, all required additives and consumables.
- xix) To carry out timely mobilization of tools / equipment / consumables/ personnel to designated drilling locations in Mizoram.
- xx) To carry out installation & commissioning of required facility in each designated drilling location.
- xxi) To carry out dismantling of Contractor's facility at drilling location upon serving notice by Company.
- xxii) To carry out ILM (Inter-location Movement) for all their items / equipment / consumables / personnel to forward locations.
- xxiii) To carry out any other job normally required to be done through the Cementing Unit.
- xxiv) To carry out any other job appropriate to Cementing Contractor during the course of drilling operation in the well, to be decided by Company.
- xxv) Any other jobs generally connected with such services shall be provided by the Contractor when called upon to do so including supply of extra items / equipment / cement additives (on mutually agreed terms & conditions)
- xxvi) To carry out dismantling of Contractor's facility & demobilization of the same upon receipt of demobilization notice from the Company.

6.0 EQUIPMENT AND PERSONNEL TO BE DEPLOYED BY CONTRACTOR:

6.1 CEMENTING UNIT:

The Cementing Unit should be a twin pump high pressure pumping unit suitable for all types of pressure pumping services including but not limited to cementing, stimulation, gravel packing and general pumping services. The unit should be mobile, self driven or trailer mounted (skid mounted unit placed on trailer will not be accepted) with stand-by horse unit, having self contained centrifugal pumps, circulating & mixing system, hoppers and feed water pump, etc.

The Cementing Unit should be complete with all accessories including but not limited to the following and capable of carrying out the jobs as specified above.

- a) The twin pumping unit capable of achieving a maximum pumping pressure of 10,000 PSI and a maximum pumping rate of 10 US Barrels per minute.
- b) **Prime Mover:** The twin pumping unit should be powered by two diesel engines, each capable of delivering 320 BHP (Minimum). The engines should have self contained system for air or electric start.
- c) **Pumps:** Two numbers of single acting triplex pumps, having a minimum output of 220 HP each. Pumps should have interchangeable fluid end sizes to vary the maximum rate and pressure output. Piping system on pump unit should allow for:
 - (i) Filling of either side of the displacement tank independently of pumping operations.
 - (ii) Direct gravity feed to one or both pumps from the displacement tanks or
 - (iii) Pressurized feed via centrifugal pressuring pump to one or both of the pumps.
 - (iv) Suction feed from the cement mixing system to one or both the pumps, pressurized.

Fluid delivery from the pump to be from the pressurized suction piping through the pump discharge valves and in to a high pressure discharge manifold. One or both the pumps should deliver fluid through the high pressure manifold simultaneously. The high pressure manifold should be rated for 15,000 PSI working pressure and should have valves to permit one or both the pumps to circulate back to the displacement tank.

- d) **Re-circulating Cement Mixing System:** Re-circulating equipment consisting of re-circulating mixer used in conjunction with a two compartment, 8-10 bbls. Mixing tub equipped with a turbine agitator in each compartment. Re-circulating equipment which uses enhanced high-shearing jet mixing system is also acceptable.
- e) **Displacement Tanks:** Twin calibrated displacement tanks graduated in 0.5 bbls increments and holding a minimum of 10 bbls each for a measured total of 20 bbls.
- f) **Central Control Console:** All controls should be centrally located on the operating platform of the unit at a control panel. The controls must include:

- i) All engine functions & diagnostic gauges for engine parameters (Oil pressure, temperature, transmission temp. & pressure etc.)
 - ii) Air actuated controls for all low pressure valve systems
 - iii) Cement mixing controls tied in to the mixing system
 - iv) Pump rate gauge for each pump with a totalizer
 - v) Pressure gauges for each pump
 - vi) Centrifugal hydraulic pressure gauges
 - vii) All safety control system
- g) **Safety System:** The Cementing Unit must incorporate adequate safety systems to avoid damage to the equipment or personnel in case of over pressurization.
- h) Full sensor package of advanced technology (without the presence of radioactive source/sensor) for monitoring and recording pumping parameters including rate, pressure and density.
- i) All parameters to be centrally recorded on PACR which should allow parameters to be viewed on a digital display and also record them so that data can be viewed, recovered, transmitted digitally and soft & hard copies can be made.
- j) 2" x 15,000 PSI WP rated high pressure line with necessary adaptors / connectors / cross-overs to connect cementing unit to circulating / cementing head at derrick floor / cellar.

6.2 BATCH MIXERS:

One No. 1x100 barrels (or 2x50 barrels) Capacity Cement Batch Mixer(s) with skid and re-circulating /jet mixing system agitator.

The Batch Mixer(s) should be complete with all standard equipment, gadgets, pipe fittings etc. for preparing cement slurries as desired by Company.

6.3 OTHER CEMENTING EQUIPMENT:

- (a) 2" Chiksen loops 8' x 2" x 10000 PSI (min.): 10 Nos. or adequate quantities.
- (b) **Circulating Heads:**
- i) 20" Bottom Buttress pin thread connection, Top 2" nipple with valve & hammer union.
 - ii) 13.3/8" Bottom Buttress pin thread connection, Top 2" nipple with valve & hammer union.
 - iii) 9.5/8" Bottom Buttress pin thread connection, Top 2" nipple with valve & hammer union
 - iv) 5.1/2" Bottom Buttress pin thread connection, Top 2" nipple with valve & hammer union.
- (c) **Cementing head with quick change adaptor:**
- i) 20" Standard single/double plug cementing head for 20" Casing with bottom buttress pin thread connection along with manifold.
 - ii) 13.3/8" Standard double plug cementing head for 13.3/8" Casing with bottom buttress pin thread connection along with double manifold.

- iii) 9.5/8" Standard double plug cementing head for 9.5/8" Casing with bottom buttress pin thread connection along with double manifold.
- iv) 5.1/2" Standard double plug cementing head for 5.1/2" Casing with bottom buttress pin thread connection along with double manifold.

6.4 VINTAGE OF EQUIPMENT AND TOOLS:

- (a) The vintage of the Cementing Unit, batch mixer(s), Surface tools and other equipment provided by the Contractor shall not be of more than ten (10) years old as on the EOI closing date. The Service Provider to confirm while responding to this EOI.
- (b) All down hole consumable equipment must be brand new. Service provider shall guarantee its satisfactory performance.

6.5 CONSUMABLES:

Oil well Cement, various cement additives and other consumables for cementation shall be delivered by the Contractor at well site(s). The Contractor shall be required to stock sufficient quantity of related consumables at site for any eventuality.

7.0 MANPOWER:

- (a) The Contractor must deploy 01 (one) competent, qualified and trained Cementing / Servicing Engineer with minimum five (05) years experience in oil/gas well cementing and stimulation jobs at rig site, besides minimum two (2) work personnel for assisting their Engineer at work site. The Cementing Engineer should have minimum educational qualification of Bachelor degree in Engineering / Science or equivalent. The Cementing Engineer should be fluent in English (written & verbal). Besides English, fluency in Hindi and any other local language will be an added advantage.
- (b) Contractor must submit the bio-data of proposed personnel and obtain clearance from the Company before actual deployment at site.
- (c) Provision of PPE (personal protective equipment) for Contractor's personnel will be the responsibility of Contractor. The Cementing Engineer should perform duty in accordance with Contractor's own SHE (Safety, Health & Environment) policy. In addition to above the Cementing Engineer and other contractor personnel at well site must comply with OIL's internal SHE policy, if need be.
- (d) Company will provide boarding, lodging and preliminary medical facility as available at site for the Crew to be deployed by the Cementing Contractor.

8.0 SAFETY COMPLIANCE:

- 8.1 The Contractor shall have to comply with the applicable and prevailing provisions of Mines Act, 1952, OISD (Oil Industry Safety Directorate) guidelines and MoEF & CC (Ministry of Environment & Forests and Climate Change) directives.

9.0 PRE-QUALIFYING CRITERIA:

9.1 The service provider / vendor must fulfill the following minimum pre-qualifying criteria for the purpose of empanelment/short-listing and issue of tender documents for hiring Cementing Services:

- (i) Service provider / vendor should be in the business of providing Oil Well Cementing Services for the past three (3) years as on the EOI submission date.
- (ii) The Service Provider/Vendor must have provided oil well cementing services for minimum five (5) numbers of exploratory wells of more than 3500 m depth each.
- (iii) The Cementing Engineer to be deployed under the contract must have minimum five (5) years of relevant experience, out of which at least three (3) years in handling oil/gas well cementation jobs independently in exploratory wells. The Cementing Engineer must have experience of well cementation jobs for at least one well of minimum 3500m depth.
- (iv) The Cementing Unit and other surface tools & equipment shall not be of more than ten (10) years old as on the date of EOI submission.

9.2 In case the Vendor/Contractor is a Consortium of Companies, the Leader of the Consortium should satisfy the minimum experience requirements as per para 9.1 (i) to (iv) above.

9.3 In case the Vendor is an Indian Company/Indian joint venture Company, the lead bidder should meet the criteria laid down in para 9.1 (i) through (iv) above.

9.4 Any party who is extending technical support by way of entering into technical collaboration with another party shall not be allowed to submit an independent bid and such bids shall be rejected straightway. Further, all bids from parties with technical support from the same principal will also be rejected.

9.5 Offers from Bidders who themselves do not meet the experience criteria as stipulated in para 9.1 above can also be considered, provided the Bidder is a 100% subsidiary company of the parent company which meets aforesaid experience criteria. In such cases, as the subsidiary company is dependent on the experience of parent company, the participating Bidder should submit an agreement/Corporate Guarantee as per **Annexure-IV**.

9.6 DOCUMENTS / INFORMATION:

The Service Provider must furnish the following documents as part of their EOI in support of fulfilling all the above pre-qualifying criteria, failing which the EOI will be rejected.

- (a) Technical Specifications Sheet with brief description of Cementing Unit and Batch Mixer(s) identified for deployment under the contract.
- (b) A letter with categorical confirmation that the Cementing Unit, Batch Mixer(s) and other surface tools & equipment as identified in the EOI for deployment under the contract shall not be of more than ten (10) years old from the date of EOI submission.

ANNEXURE- I

Experience Statement of Service Provider / Vendor

Oil Well Cementing Services

Sl. No.	Contract No	Name of client	Place of operation	Depth of wells	Details of casing strings cementation		Date of Commencement of contract	Date of Completion of contract
					Type	Depth		

N.B. : Please add rows in case of more experience.

ANNEXURE - II

Statement of Current work in hand of Service Provider / Vendor

Oil Well Cementing Services

Sl. No.	Contract No.	Name of client	Place of operation	Depth of wells	Details of casing cementation jobs		Period of contract	Commencement Date of contract
					Type	Depth		

ANNEXURE - III

Financial Turnover of Vendor/Service Provider as per Audited balance sheets / profit and loss accounts for the last three (3) accounting years, preceding the date of submission of EOI.

Accounting Year	Annual Turnover (indicate Currency)	Net Worth (indicate Currency)

PARENT COMPANY GUARANTEE

(TO BE MADE ON STAMP PAPER OF REQUISITE VALUE AND NOTORIZED)

DEED OF GUARANTEE

THIS DEED OF GUARANTEE executed on this day of 2016 by M/s..... (mention complete name) a company duly organized and existing under the laws of (insert jurisdiction/country), having in Registered Office at..... herein after called “the Guarantor” which expression shall, unless **excluded** by the repugnant to the subject or context thereof, be deemed to include its successors and permitted assigns.

WHEREAS;

M/s Oil India Limited, a company duly registered under the companies Act 1956, having its Registered Office at **Duliajan, Dist: Dibrugarh, Assam-786602, India** and having Corporate Office at **Plot No. 19, Sector-16A, Noida, UP** hereinafter called “**Company**” which expression shall **unless** excluded by or repugnant to the context thereof, be deemed to include its successor and assigns, invited Expression of Interest on vide OIL/NEF/GLOBAL/EOI/031/2016 for Cementing Services including supply of oil-well Cement & Additives etc.

M/s..... (Mention complete name), a company organized and existing under the laws of..... (Insert jurisdiction/country), having its registered office at..... (give complete address) hereinafter called “the Contractor” which expression shall, unless executed by or repugnant to the subject or context thereof, be deemed to include its successor and permitted assigns, *a wholly owned subsidiary of the Guarantor, have, in response to the above mentioned tender invited by the Company, submitted their bid no..... to the Company with one of the condition that the Contractor shall arrange a guarantee from its parent company guaranteeing due and satisfactory performance of the work covered under the said tender including any change herein as may be deemed appropriate by the Company at any stage.

The Guarantor represents that they have gone through and understood the requirement of the above said tender and are capable of and committed to provide technical, financial and such other supports as may be required by the Contractor for successful execution of the same.

The Contractor and the Guarantor have entered into an agreement dated..... as per which the Guarantor shall be provided technical, financial and such other supports as may be necessary for performance of the work relating to the said tender.

Accordingly, at the request of the Contractor and in consideration of and as a requirement for the Company to enter into agreement(s) with the Contractor, the Guarantor hereby agrees to give this guarantee and undertakes as follows:

1.0 The Guarantor (Parent Company) unconditionally agrees that in case of non-performance by the Contractor of any of its obligations in any respect, the Guarantor shall, immediately on receipt of notice of demand by the Company, take-up the job without any demur or obligation, in continuation and without loss of time and without any cost to the Company and duly perform the obligations of the Contractor to the satisfaction of the Company. In case the guarantor also fails to discharge its obligations herein and complete the job satisfactorily, Company shall have absolute rights for effecting the execution of the

job from any other person at the risks and costs of the Guarantor. The Guarantor also undertakes to make good any loss that may be caused to the Company for non-performance or unsatisfactorily performance by the Guarantor or the Contractor of any of their obligations.

2.0 The Guarantor agrees that the Guarantee herein contain shall remain valid and enforceable till the satisfactory execution and completion of the work (including discharge of the warranty obligations) awarded to the Contractor.

3.0 The Guarantor shall be jointly with the Contractor as also severally responsible for satisfactory performance of the contract entered between the Contractor and the Company.

4.0 The liability of the Guarantor, under this Guarantee, is limited to the value of the contract entered between the Contractor and the Company i.e. upto and in no event shall be Guarantor's liability hereunder, either in its capacity of Guarantor or as a Contractor should it perform the contract in the event of the Contractor's non-performance as per point 1 hereinabove, exceed that of the Contractor under the mutually agreed contract awarded to the Contractor. This will, however, be in addition to the forfeiture of the Performances Guarantees furnished by the Contractor.

5.0 The Guarantor represents that the Guarantee has been issued after due observance of the appropriate laws in force in India. The Guarantor hereby undertakes that the Guarantor shall obtain and maintain in full force and effect all the government and other approvals and consents that are necessary and do all other acts and things necessary or desirable in connection therewith or for the due performance of the Guarantor's obligations hereunder.

6.0 The Guarantor also agrees that this Guarantee shall be governed and construed in accordance with the laws in force in India and subject to the exclusive jurisdiction of the courts of....., India.

7.0 The Guarantor hereby declares and represents that this Guarantee has been given without any undue influence or coercion from any person and that the Guarantor has fully understood the implications of the same.

8.0 The Guarantor represents and confirms that the guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing law or any judgment.

For & on behalf on (Parent Company)

M/s_____

Witness:

1.

2.

*strikeout, if not applicable

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