



ऑयल इंडिया लिमिटेड  
(भारत सरकार का उद्योग) पंजीकृत कार्यालय: दुर्लियाखण, असम  
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## GLOBAL EXPRESSION OF INTEREST

**EOI REF. NO. OIL/CEMG/CY/EOI/016 /2014**

**DT. 31.10.2014**

**LAST DATE OF SUBMISSION : 17 :00 HRS ( IST) OF 18.11.2014**

**Sub: Notice Inviting “Expression of Interest”(EOI) for provision of Bundled Services for Drilling Services and Tangibles in Deepwater block of Gulf of Mannar ( CY-OSN-2009/2)**

### Introduction

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. A *Navratna* Company under the Ministry of Petroleum and Natural gas, Government of India (GOI), it is the second largest national oil and gas company in India as measured by total proved plus probable oil and natural gas reserves and production.

OIL was awarded the Cauvery offshore block CY-OSN-2009/2 (area: 1621 km<sup>2</sup>) under NELP VIII bidding round with 50% Participating Interest as Operator and Oil and Natural Gas Corporation (ONGC) with 50% Participating Interest in the Gulf of Mannar. The Production Sharing Contract (PSC) was signed on 30th June 2010 and the Petroleum Exploration License (PEL) was granted on 2nd August, 2010 by the Government of India.

OIL has a firm program of drilling one (1) well in the above block as a part of Minimum Work Programme (MWP) as per PSC. Expected water depth of the prospective wells may vary from **400m to 500 meters. Expected timeline to spud the first well is by end of May 2015.**

OIL (referred to as **Company in the EOI**) hereby invites Expression of Interest from experienced and reputed prospective **Bidders** to offer the services as enumerated below.

## **1.0 Services**

**1.1.1 Cementing Equipment with Floating, Guiding, Centralizers etc and Services** with supply of Cement and additives

**1.1.2 Mud Engineering Services with supply of mud chemicals and additives**

**1.1.3 Directional and Measurement Equipment and Services**

**1.1.4 Wire line Logging and Services**

1.1.5 Mud Logging Unit and Services

1.1.6 Core Handling/Preservation and Analysis Services

1.1.7 Shore base services (including Air and Marine Logistics support and services)

1.1.8 Casing and Tubing Running Tools and services

1.1.9 Drilling, Fishing, Milling, Plug and Abandonment tools and services

1.1.10 Hole Enlargement Tools and Services

1.1.11 Coring tools and services

1.1.12 Liner Hanger Equipment and Services

1.1.13 RTOC equipment and services

1.1.14 Well testing equipment and services

1.1.15 Supply of Drilling Bits on Consignment basis.

1.1.16 Supply of casings of size 16" and below as per well program (Optional)

## **1.1 Requirement for Services**

1.2 Bidder must have minimum 5 (five) years experience and at least 3 (Three) wells in the deepwater environment in the water depth range or more as defined with equipment, consumables and services, operators and others as per broad scope of work to reputed E&P companies for last five years. Period in this regard shall be reckoned prior to the schedule closing date of submission of this EOI. Lead Bidder should preferably be able to provide all the services, however, in case of JV/Consortium, the lead Bidder should be able to provide (in house) at least 3 out of the 4 services (1.1.1/1.1.2/1.1.3/1.1.4). Rest all services may be provided by the JV /Consortium partners, but each individual service provider should meet the relevant company experience.

1.3 Bidder should have well defined and documented QHSE policies/procedures to ensure quality and safe work performance during the operations. Bidder required to provide brief on Health, Safety, Environment and Quality Assurance systems followed in the last five years (**Appendix 3**).

- 1.4 Bidder should have adequate capabilities, resources and personnel to provide and execute required services. Bidder required to provide details of work in hand and past contract details **(Appendix 1 & 2)**.
- 1.5 Bidder required to have its own laboratory and testing facilities in India for the engineering, design and testing of equipment and systems wherever applicable. Bidder should have adequate capabilities, resources and personnel to provide and execute required services as per relevant API and other guidelines.
- 1.6 Bidders make themselves aware of the Indian regulatory requirements that apply to carrying out the scope of work with respect to licenses, and other applicable rules for carrying out the work; Bidder with knowledge of the area of operations and by its independent observations and enquiries to have fully informed and satisfied itself as to the nature of the area of operations, means of access, local facilities, climatic conditions, labour conditions and practices, local terrain conditions, local logistical requirements, any and all security, fire, safety explosives or other regulations, permissions which may affect the execution of the Works, all environmental concerns and conditions, the nature, extent and practicability of the Works and all matters whatsoever affecting in safe carrying out of the broad Scope of Work indicated. **(Block details and tentative well details are given in Annexure – 1)**.
- 1.7 Bidder to submit Organisational outline proposal detailing their nominated management, staff, and business process support to carry out an Offshore Deepwater Drilling campaign for all types of wells. Bidder to provide details of his Management, Operating and Maintenance schemes with copies of their certification wherever applicable.
- 1.8 Bidders required to provide Details of Equipment/Resources directly owned/outsources and average age of equipment/resources proposed for the Company's Deepwater drilling programme.
- 1.9 Bidder to indicate realistic Mobilization period for tool and Equipment (including Manpower) from date of LOA. However, OIL's tentative spud in date is 31.05.2015.
- 1.10 Bidder required providing case histories / references of similar work done for the services applying for and including a complete inventory of tools/tackles and best practices in line with new technologies and new regulations for deepwater drilling.
- 1.11 Any other information which is relevant to the services and establish that Bidder is a competent equipment/material/service provider.

## **2.0 Financial and other criteria:**

Bidder's net worth shall be positive. Audited financial statements for the last three years are required to be submitted. In case of consortium bidding, the net worth of the leader of the Consortium shall be positive. Similarly, net worth of the ultimate / holding parent company in the last financial year shall be positive in case bidder who themselves do not meet the above net worth criteria. Copy of the latest published Audited Annual Report to be submitted by the ultimate / holding parent company.

### 3.0 Broad Scope of work: Cementing Equipment and Services

**3.1 Bulking equipment and facility:** Bidder to provide all necessary equipment, supervision, labour and services to provide and operate one independent bulking facility at its Supply Base to perform, including but not limited to, the following:

- 3.1.1 Cement and additives supply
- 3.1.2 Transport facility to transfer cement from warehouse to the Bidder supplied silos in the jetty
- 3.1.3 Pumping cement to the supply boats provided by Bidder
- 3.1.4 Testing laboratory for cement and other chemicals
- 3.1.5 Repairing facility for its equipment
- 3.1.6 Maintain an inventory of spare parts
- 3.1.7 Maintain an inventory of cement chemicals and cement
- 3.1.8 Accommodation, transport available for crew
- 3.1.9 Personnel and Supervision for the facility and other labours as required

Some limited space at Bidder's shore base facility might be given to the Company to carry out some of the operations or to store either Company's or Company's third party's materials for a short duration to carry out all activities required to fulfil the complete scope of work

**3.2 Cement Slurry design and execution:** The Bidder shall be responsible to design and plan the cement job and design the cement slurry for offshore deep-water wells as per the well requirement based on the data provided by Company. The design should be based on latest applicable API and other relevant Deepwater cementing and barrier guidelines with their own chemicals and additives and to execute the job as per their own plan approved by Company and using the latest cementing software to simulate the cement job including centralizer placement software.

The design and simulation shall include but not be limited to the following broad criteria:

- Spacer types, slurry formulation, slurry properties and additive usage
- Pumping schedules
- Safety limits – both static and dynamic against the formation strength at setting depths of various casing
- Recommended and detailed cementing procedures
- Recommended centralization plan
- Slurry recommendation must be accompanied by laboratory results
- Use anti-gas migration additives for specific casing cement jobs
- Cement Evaluation Report
- End of Well Report
- Experienced Personnel and Supervision on Rig and at Base

**3.3 Equipment, Materials and Additives:** Bidder to provide all equipment, cement and additives necessary to carry out a cement job on the broad indicative, but not limited to the following:

- Top Drive (TD) Subsea Cementing head complete with Subsea plug launching Mandrill to Match Drill string connection available with the Rig Contractor.
- Subsea Plug sets
- Tag In/Stab In Adapters and Drill Pipe centralisers for top hole cement jobs
- Casing Centralisers ( Bow type/ Semi Rigid type/ positive type) with stop collars and Casing Spirolizers with stop collars for all sizes of casing
- All float equipment which includes float shoe, float collar and non-rotating subsea cementing plugs for casings as per well plan ( a tentative casing programme is attached in Annexure – 1) and also for sizes as per contingency casing requirement if any. All plugs & float equipment will be PDC bit drill able. Retrievable Storm and Squeeze Packers/ Bridge Plugs/Cement Retainers
- Casing Reamer Shoe for different types of casing sizes and grades
- Cement Additives and Chemicals
- **Optional Equipment:** Bidder to indicate availability/mobilisation time for 10000 Psi rated, Diesel Powered Twin Pump Cementing Unit and Diesel powered 2 X50 barrels Batch Cement Mixers

#### **4.0: Broad Scope of Work: Mud Engineering Equipment and Services**

**4.1** Bidder is responsible for the execution of entire drilling fluid, Low Toxic Synthetic Oil Based Mud (LT SOBMD) as well as Water Based Mud (WBM), engineering and services and well testing fluid services.

**4.2** Bidder's broad scope of work, but not limited to, includes supply of Baryte, bentonite, mud chemicals and additives, clean up chemicals and others, installing, commissioning, testing, providing, operating, maintaining and repairing of Mud Testing Equipment and laboratory facilities, Waste Management services and providing Personnel for all types of services covered in the broad Scope of Work with adequate experience in the deepwater environment and water depth range specified, providing technical back up and any specialized services that Bidder is capable of and required by Company.

**4.3** Bidder shall manage the inventory of chemicals, solid and liquid bulk (bulk), Mud Plant equipment and accessories required to provide drilling fluid services at its shore base and on Rig. This will involve despatch/loading of chemicals and bulk to Supply vessels at Jetty. Bidder required ensuring all time availability of drilling fluid chemical and necessary resources at the rig as per operational requirements.

Bidder to provide all necessary equipment, supervision, labour and services to operate one independent bulking facility including Mud Plant and other mixing systems at its Supply Base to perform the Scope of Work.

Some limited space at Contractor's facility might be given to the Company to carry out some of the operations and to store some of the Company's item and /or Company's third party's materials for a short period to carry out the out all activities required to fulfil the complete scope of work.

4.4 Bidder to ensure that all mud and fluid engineering designs take special note of the fact so as to ensure that the fluids will be stable and be able to withstand wide range of temperature and pressure, without losing their integrity.

4.5 **Optional Items:** Bidder to indicate its capability and inventory of Solids control equipment and services for equipment like Centrifuges/Augur and Drier system/MOTF/DKD and any other following best practices in Deepwater drilling from Bidder's experience.

Complete technical support and backup is required from the Bidder for all fluid related issues. This requirement is on round the clock basis. Bidder should also extend support from its global technical team to offer better engineered solutions and also provide access to its international laboratory and other significant facility centres to add value to Company operations as and when required.

## **5.0 MWD/LWD/Directional Drilling/Wellbore surveying services**

### **Broad scope of work:**

Bidder's responsibility, but not limited to, includes the provision, supply, maintenance and repair of tools, equipment, materials, spares, consumables and personnel for the provision of Steerable Positive Displacement Motors, MWD/LWD systems and Deviation monitoring services (like Electronic Multi Shot, Magnetic Single Shot and Gyro equipment and others) to drill the wells in Deepwater environment and water depth as enumerated. Bidder also required to provide the technical support and manpower, recommendations, programs and reports for the Services offered.

### **5.1 Directional Drilling Equipment and Services**

5.1.1 Scope of service shall include but not be limited to provision, supply, operation and maintenance of Down hole Mud Motors Package for drilling vertical / directional / sidetrack wells with all the other associated Equipment, BHA components and personnel as per Company's final well design and down hole conditions. This services shall be used for Drilling vertical as well as directional well with for all hole sizes as per well program. Directional drilling services offered should be capable of side tracking and drilling the well in the desired trajectory or the requirement of using the motors for performance drilling in vertical deepwater exploratory wells. Bidder to provide its inventory of Rotary Steerable System (RSS) tools/equipment and services which might be an Optional requirement.

5.1.2 Bidder to indicate its dedicated software like Open Wells ( Compass) reporting system and load up all the well data in its directional planning software and provide directional and anti-collision plots and recommend BHA, analyze Torque / Drag and Hydraulics and other relevant issues for the drilling of the wells.

5.1.3 Bidder to propose methodology and tools tackles inventory for different phases of drilling and to provide historical Mean Time Between Failure (MTBF) statistics of each tool/Equipment provided along with the proposed servicing/refurbishment schedule. Bidder also required to provide technical/operations manuals/Audio-visual aids in respect of major Equipment like down hole motors etc. With respect to range of Dogleg severity (DLS), Temperature rating,

compatibility with LTSOBM and WBM mud systems, tolerance to LCM concentration, and other pertinent and relevant technical requirement/limitations.

5.1.4 Bidder to provide a designated and dedicated Coordinator (for all services to be rendered) to work with Company Multi-disciplinary team with minimum 10+ years of field operations, planning and providing technical support / co-ordination in offshore projects and at least 5 years experience in Deepwater environment.

## **5.2 MWD/LWD Services**

5.2.1 Bidder to provide Measurement While Drilling (MWD) and Logging While Drilling (LWD) Tools, Personnel and Services including but not limited to;

- Surface Recording Equipment / Unit
- Down hole MWD and LWD logging sensors / Inserts
- Down hole MWD and LWD collars
- Stabilizers / other tools as required
- Sub-connections and necessary crossovers
- Surface mud parameters, measurement sensors and accessories like fishing tools and others as applicable

5.2.2 Bidder to provide details of formation evaluation services as required to complete the drilling programme with GR, Resistivity, Neutron, Density, Temperature, bottom hole annular pressure evaluation tool, Formation pressure evaluation, Deep investigating resistivity and near bit resistivity tools and others as required may also be included in its proposed methodology

5.2.3 Bidder to provide details of the tools and tackles and services/software in its inventory as part of its proposal with technical presentation and provide Mean Time Between Failure (MTBF) statistics from nearest geographical area for which such statistics are available for each sub / sensor type listed as part of proposal. Bidder shall provide the tolerance of various tools to the LCM concentrations. Bidder to indicate calibration schedule for regular shop or Well site calibration of all LWD / MWD devices including tolerance limits

5.2.4 LWD/MWD data to be integrated with Rig's communication system for Real Time Data transmission from Rig to Company's designated onshore base offices. Bidder to ensure that data connectivity is smooth and in a format for easy hooking up to Rig's transmission hardware and software. Bidder to provide the allowable maximum rate of measurement for each tool in different hole sizes to enable effective measurement of real time data by the tool. Bidder to indicate feasibility of web based system for transmission of real time MWD / LWD data from well sites to base offices and vice versa using facilities provided by Company

5.2.5 Bidder to provide detailed documentation regarding Bidder's proposed radioactive source handling and operational procedures in the event that radioactive sources are lost in the hole. Contractor shall strictly comply with all requirements of Indian or other applicable law regarding the importation and use of radioactive material. Bidder will be required to obtain, at its sole cost and expense, all required approvals, licenses and permits with respect thereto, and shall furnish to the required approvals, licenses and permits to the Company prior to start of operations.

- 5.2.6 Bidder to provide a designated and dedicated Coordinator (for all MWD/LWD services to be rendered) to work with Company Multi-disciplinary team with minimum 10+ years of field operations, planning and providing technical support / co-ordination in offshore projects and at least 5 years experience in Deepwater environment.

## 6.0 Wireline Logging Unit and Services

**Broad Scope of work:** Bidder to provide the following broad services but not limited to:

Provision of Surface Equipment which should be environmentally suitable and complete with all intrinsically safe and explosion proof sensors and detectors having digital display, audio/visual alarm.

1. Open Hole Logging
2. Cased Hole Logging
3. Operations Related to Electrical Wireline Logging
4. Perforations with wire line as well as tubing conveyed
5. Pipe conveyed logging equipment
6. Drilling support services like Free point/Backoff tool
7. Cement Retainer/Packer/Bridge Plug setting tool and others
8. Geophysical wellbore surveys
9. Equipment and software to enable real time data transmission
10. Real time downhole pressure data acquisition during DST operation
11. Personnel and Services

6.1 Bidder to take note that It shall have its own approved place for storage of radioactive materials. Bidder will also have to transport the explosives/ radioactive materials in duly approved mobile vehicles to the Jetty for loading onto Company provided Supply Vessels.. Bidder to take note of some of the regulations like the relevant sections of the Atomic Energy Act 1962, Radiation Protection Rules 1971, Atomic Energy Safe Disposal Rules 1987 and all such other statutory regulations as may be imposed by the Atomic Energy Regulatory Board and other regulatory authorities in respect of all operations pertaining to the handling of radioactive sources, safety, security, storage and transportation of the same.

6.2 Bidder to propose methodology and tools tackles inventory for different phases of drilling and to provide historical Mean Time Between Failure (MTBF) statistics of each tool/Equipment provided along with the proposed servicing/refurbishment schedule. Bidder also required to provide technical/operations manuals/Audio-visual aids in respect of major Equipment and services like Temperature rating, compatibility with LTSOBM and WBM mud systems and other pertinent and relevant technical requirement/limitations. Bidder is requested to include any other tools / services which Bidder deems required or suggests in terms of latest Marketed Technology / Time saving for Company.

6.3 Bidder required to carry out quick look processing/interpretation at the well site and also have data processing centre within India for carrying out detailed processing of the data acquired by the services. The bidder would provide necessary facilities / make arrangements for transmitting the acquired data from the rig-site to the their interpretation center so that the necessary interpretation results can be provided to the company within prescribed time.

## 7.0 Mud Logging Unit and Services

**Broad Scope of work:** Bidder to provide the following broad services but not limited to:



1. Provision of Surface Equipment which should be environmentally suitable and complete with all intrinsically safe and explosion proof sensors and detectors having digital display, audio/visual alarm.
2. Monitor all Drilling parameters, Mud parameters, Flow Line gases and others
3. Prepare Geological Mud log, Drilling log, Time Log and Gas Log
4. Provide Mud log outputs regularly and as desired by Company's well site geologist
5. Carry out D-Exponent, calcimeter and shale density analysis/ measurements
6. Aggregation and Transmission of all mud logging unit data in Real time
7. Collect, examine for florescence and cut, and describe mud cuttings and cores
8. Personnel like Data Engineer, Mud Logger, Sample Catcher on 24 hour availability basis

7.1 Bidder to propose methodology and tools tackles inventory for different phases of drilling and to provide historical Mean Time Between Failure (MTBF) statistics of each tool/Equipment provided along with the proposed servicing/refurbishment schedule. Bidder also required to provide technical/operations manuals/Audio-visual aids in respect of major Equipment and services like Temperature rating, compatibility with LTSOBM and WBM mud systems and other pertinent and relevant technical requirement/limitations. Bidder is requested to include any other tools / services which Bidder deems required or suggests in terms of latest Marketed Technology / Time saving for Company

7.2 Bidder required to carry out quick look processing/interpretation at the well site and also have data processing centre within India for carrying out detailed processing of the data acquired by the services. The bidder would provide necessary facilities / make arrangements for transmitting the acquired data from the rig-site to the their interpretation centre so that the necessary interpretation results can be provided to the company within prescribed time.

## **8.0 Core Handling/Preservation and Analysis Services**

**Broad Scope of work:** Bidder to provide the following broad services but not limited to:

1. Core Handling/Preservation and Transportation
2. Core Processing
3. Core Photography and Petrophysical Analysis
4. Core Storage and archiving
5. Bidder to indicate its QA/QC protocol and sample Core analysis format for the services offered at the time of submission of EOI

## **9.0 Shore base Management Services**

### **9.1 Air Logistics and services**

### **9.2 Marine Logistics and services**

9.3 Bidder providing Shore base management services should have worked for an E&P Operator in various aspects of shore base management in the last five years. Either through JV/Consortium with leading Air logistics and Marine Logistics equipment and service provider, Bidder is required to facilitate provision of Helicopter and Marine logistics services.

9.3.1 The Air Logistics Service Company required to have experience for offshore helicopter operations for a minimum period of 3 years with satisfactory safety record for leading E&P Operators and in compliance with DGCA and other regulatory requirement.

9.3.2 The Marine Logistics Service Company for AHTS/OSV must have experience and provide documentary evidence of having owned, manned and operated for different aspects

deepwater operations like Anchor Handling and others for a minimum period of three years in deepwater operations in the water depth range as specified.

9.3.3 Period in this regard shall be reckoned prior to the schedule closing date of submission of this EOI.

#### 9.4 **Broad Scope of work:**

##### **Shore Base Management:**

9.5 To provide well equipped storage yard on the east coast with open and covered material storage area. At this point, it is envisaged that **Tuticorin** port will be the most suitable for operations for its proximity to the drilling location. Bidder required to provide all required permissions, regulatory and other applicable laws of land, for the entire scope of work including management of Air and Marine logistics.

To provide all Bulk movement including but not limited to Bunker oil, Base oil, Cement and Baryte, Drill water and Pot water and other material generally required for offshore drilling, including movement from yard/other mobile storage means to OSVs in the Jetty. Bidder to facilitate timely movement of OSVs with proper planning of all-weather Port Operations and Berthing and other required port procedures. Bidder to facilitate in close coordination with other service providers for safe storage/movement from shore base to rig and vice versa of Radioactive material and other material used in drilling.

9.6 To provide space within the proposed yard for placement of Mud plant, storage for Cement, Baryte, other chemicals and additives, Tubulars, casings and wellhead material and other accessories. Material handling equipment such as Cranes, Trailers, Trucks, Forklifts etc. for the loading/unloading operations will be required. To provide as required Inspection of Tubulars by accredited Inspection agencies as per relevant API guidelines.

9.7 To provide CHA services, logistics support including permissions from regulatory authorities. Company will provide recommendatory letters wherever applicable.

9.8 To provide Marine logistics like AHTS/Supply Vessels/PSV/Offshore Supply Barges required to support Deepwater drilling activities. Bidder to be responsible for obtaining and maintaining all statutory clearance like DG Shipping, Clearance for operating the vessels on the Indian Coast, Naval clearance from Ministry of Defence, DRDO, Custom clearance and others as the case may be.

9.9 Vessels to be fit-for-purpose and Dynamic positioned as per guidelines to be able to carry out Anchor handling operation in Deepwater environment and water depth range as specified and have enough deck capacity to carry Risers, Casings, wellhead material and other equipment and material which is industry standard for deepwater drilling. Vessels to be equipped with separate tankages bulk items like barite, cement, diesel, water, liquid mud, base oil etc to support the rig operations. The vessels shall have to handle water based mud as well as SOBM.

9.10 Bidder to provide working methodology with Marine logistics Company and to broadly indicate the fleet status and **details including Classification status, Vessel particulars and average age of the vessels proposed.**

9.11 Bidder to provide Helicopter which should be minimum Twin engine, passenger version, IFR rated helicopter with floatation gear duly equipped for offshore operations with IFR rated night flying qualified crew for the type of helicopter to be used and with all requisite equipment, appliances for the safe operation as per DGCA and other regulatory requirements for safe offshore operations. Helicopter shall have the capacity for carrying minimum 10 passengers and 50 Kgs. Cargo.

9.12 Bidder to provide working methodology with Air logistics Company and to broadly indicate the fleet status and **details including Classification status, Helicopter particulars and average age of the Helicopters proposed.**

## **10.0 Casing and Tubing Running tools and Services**

10.1 Broad Scope of work: The services will be required on **Call out Basis/Rental** and Bidder shall indicate the minimum call out time for each job.

The broad Scope of Work will include but not be limited to:

- 10.2 Provide required tools and equipment along with required number of personnel for various activities at the rig and at the Storage base such as power tong units, power tongs and operators, casing stabbers, computerized torque turn make up specialists, casing dopes conductor driving specialist on a call-out or monthly basis, to handle and run conductors, casing and tubing strings.
- 10.3 To coordinate rig inventory and shall be responsible for stocking of spares for casing and tubing handling tools such as O-rings, seals, anti-rotation pins, locking blocks etc.
- 10.4 Casing and Tubular running services for BTC and other API threads and Premium connections, multi joint and other types of connections used in offshore deep water drilling.
- 10.5 Making Casing Tally & service the casing prior to run in.
- 10.6 Make up casing shoe, Baffle Collar, Scratchers, Stop rings etc. to casing shoe joint.
- 10.7 Lower Casing as per policy provided by Company.
- 10.8 Make up casings at proper torque required for each type, size of casing.
- 10.9 Make up Centralizers as per policy.
- 10.10 To provide Equipment and supervision for the fill-up and circulation tool adaptable to the top drive system. The tool shall be capable of fill-up and circulation while casing and tubing is being run and shall be capable of use on different casing / tubing sizes. Bidder is to provide normal inventory it carries for offshore operations.
- 10.11 To maintain the makeup torque chart for record for each casing.
- 10.12 To provide repair / rebuild facilities and technical Personnel to operate from the base for repair and maintenance of casing and tubing running, handling and inspection of Equipment and tools. To provide sufficient backup tools, maintain, repair, and refurbish all the tools and Equipment in proper working condition at all times. Backup tools, spares & Equipment shall be sufficient for uninterrupted operation of the Rig. Additionally, to shall extend these facilities to other Company service providers i.e., Liner hanging running etc.
- 10.13 Provide Tools, running/Job records, any recommendations, and any other reports as requested.
- 10.14 Equipment failure reports.
- 10.15 Providing any other programs or reports relevant to the Operations and to the Contract.
- 10.16 Bidder to indicate the availability of Casing Running Tool with Top Drives and service personnel to run Intermediate casing strings if required and the mobilization time required and history of similar services rendered.

## **11. Drilling, Fishing, Milling, Plug and Abandonment tools and services**

### **Section 1: Drilling Tools:**

The services will be required on **Call out Basis/Rental** and Bidder shall indicate the minimum call out time for each job and methodology of providing the services for Deepwater operations. Bidder is also to indicate the tools which would require service personnel from the Bidder to operate safely.

**Broad Scope of work:** Bidder to provide the following broad services but not limited to:

11.1 To provide, supply and maintain all the drilling down hole tools as required by Company for the drilling campaign. The broad description of drilling tools to be provided are: Double Acting Hydraulic drilling jars and drilling accelerators/Crossover subs/ Drill string floats, dart subs, etc./ Casing scrapers.

11.2 Short Drill Collars/ Non Magnetic Drill Collars/Stabilisers/Drill Pipe and Tubing Pup joints/Drill Pipe and Tubing Landing string used for deep water operations.

11.3 Slim hole drilling Tubular and tubular handling tools for sizes like 3-1/2" Drill Collars, 2-7/8" drill pipes and others

11.4 Miscellaneous drilling tools like Ditch magnets, Full Opening Safety Valves (FOSV), Drop In Check Valves (Retrievable type), Pumping Subs, Cup Testers,

11.5 Other drilling tools as specified normally the Bidder provides for similar Deepwater drilling campaign.

11.6 Bidder is requested to indicate the inventory it normally carries for deep water operations with regards to rental of drill pipes of various sizes, tubing for well testing and methodology for rental by company if it requires so and lead time required from call out time.

## **Section 2: Fishing, Milling, Plug and Abandonment tools and services**

The services will be required on **Call out Basis/Rental** and Bidder shall indicate the minimum call out time for each job and methodology of providing the services for Deepwater operations. Bidder is also to indicate the tools which would require service personnel from the Bidder to operate.

Bidder is required to provide, supply and maintain fishing, milling and abandonment tools as specified but not limited to the following:

11.7 Overshots to catch all tubular, tools and downhole equipment

11.8 Spiral grapples and spiral grapple controls for overshots

11.9 Basket grapples, mill controls and packers for overshots

11.10 Overshot extension subs, Over shot guides for overshots

11.11 Junk subs for each hole size.

11.12 Reverse Circulating Junk Baskets for each hole size.

11.13 Fishing Magnets for each hole size.

11.14 Junk Mills for each hole size.

11.15 Flat Bottom mills for each hole size (Concave and Bladed).

11.16 Watermelon/ String mills for each casing size.

11.17 Mill redress kits.

11.18 Casing spears for each casing size.

11.19 Marine casing cutters and spare knives for each casing/drive pipe size.

11.20 Fishing jars, accelerators and fishing bumper subs

11.21 Casing patches

11.22 Other tools required on need basis for Deepwater drilling in Bidder's inventory

## **12. Hole Enlargement tools and services:**

The services will be required on **Call out Basis/Rental** and Bidder shall indicate the minimum call out time for each job and methodology of providing the services for Deepwater operations. Bidder is also to indicate the tools which would require service personnel from the Bidder to operate.

**Broad Scope of work:** Bidder to provide the following broad services but not limited to:

- 12.1 Hole openers
- 12.2 Under reamers
- 12.3 Near bit and string stabilizers
- 12.4 Near bit and string Roller reamers
- 12.5 Gauge rings and Stabilizer gauges

### **13 Coring Tools and services**

**Broad Scope of work:** The services will be required on Call out Basis and Bidder shall indicate the minimum call out time for each job.

The broad Scope of Work will include but not be limited to:

- 13.1 The BIDDER shall provide equipment, personnel, services and consumable to perform coring in Water / Synthetic Based Mud in 12-1/4", 8-1/2" or 6" vertical as well as deviated hole sections (indicative at this stage) including, but not limited to, provide, operate, maintain and repair its coring equipment, core heads, core barrels, core handling equipment, consumables, spares and personnel to perform coring operations at the site successfully.
- 13.2 BIDDER shall provide a well site coring engineer on callout basis. The Coring Engineer needs to discuss the Core Acquisition plan with OIL team and submit a detailed coring programme to be executed on the Rig. The Coring Engineer shall have at least 5 years of experience in the type of coring systems for performing coring job.
- 13.3 BIDDER shall also provide a core handling technician having minimum of 2 years of experience in handling similar type of jobs including foam injection.

### **14 Liner Hanger Equipment and Services**

Bidder to provide details of its capability/inventory for Liner hanger tools/accessories/Spares/personnel and Bidder to provide details of systems but not limited to:

14.1 Drawings, supporting literature, technical data sheets & installation & running procedures to fully evaluate the offered equipment & tools used in offshore Deepwater drilling in water depth range as specified and to indicate whether the offered tools are Rental/Rent free status and methodology for 'use or return' basis.

14.2 Weights & dimensions of major equipment

14.3 Track record of the offered Liner Hangers, covering the following details, in offshore deepwater environment as specified but not limited to the following:

- a. Water depth of installation
- b. Type of well Exploratory or Development Gas or oil wells
- c. Project name and Operator's name
- d. Quantity supplied and year of supply

## 15. Real Time Operation Centre (RTOC) and services

### Requirement for Services –

Bidder must have minimum 5 (five) years experience and at least one RTOC set up and management for any major Offshore E&P Operator. Period in this regard shall be reckoned prior to the schedule closing date of submission of this EOI.

**Broad Scope of work:** The broad Scope of Work will include but not be limited to:

### Firm Scope: Section 1

- 15.1 To set up with IT Hardware, software, Connectivity and associated services for Real time data transmission to and from the rig – Offshore rig and New Delhi base Operational centre. Optional connectivity provisions to Oil HQ, Duliajan.
- 15.2 Acquiring, collecting and transmitting real time surface and sub surface parameters from the offshore rig to the RTOC in OIL office at New Delhi. On the rig, data will be collected from rig contractor and service companies, in industry standard format (WITS/WITSML) and will be aggregated, replicated and transmitted to OIL office in real time using Bidder-provided ~~provided~~ V-SAT or any other satellite link. The data must be quickly buffered in case of communication failure and must be securely stored and distributed.
- 15.3 Monitoring of rig operations on a 24x7 basis using real time data transmission and real time drilling optimization software with Domain Experts for predicting pore pressure, drilling optimization, MIS as per Industry formats.

### Optional Scope: Section 2(On call out basis)

- 15.4 Real time updating of geological and geophysical model, well placement and Geo-steering
- 15.5 Pre drill and Real Time Application and analysis of Well Engineering issue for drilling optimization like Real Time Data Monitoring and Optimization, ECD Management and provide the Real Time Pore Pressure Prediction
- 15.6 Wellbore Stability Surveillance, Monitoring and management of ECD/ESD and its trend. Analysis of Pore Pressure and Fracture Pressure trends, Surge/Swab, Hydraulics analysis, Real time LOT and FIT, Pick up and Slack off weight and trend analysis, down hole WOB, Torque, Drag and hydraulics, down hole RPM, Vibration, shocks, Stick-slip etc,
- 15.7 Real time Mud Volume management with the help of logging parameters like Active and Reserve Pit Volumes, Trip tank, Gas volumes and interpretations, Mud density, Temperature and Conductivity (In and out)
- 15.8 Monitoring of LWD/MWD/WL log parameters like Resistivity, Gamma ray, Density and Porosity, Sonic Delta Time and Formation Pressure etc
- 15.9 Drilling optimization software by importing real time data to get the following
  - Optimization of drilling parameters such as WOB, RPM, Flow in, SPP and Mud Weight etc.
  - Elimination of Stick-Slip, Torque and Drag issues.
  - Monitoring and analysis of drill string Vibrations
  - ECD management with respect to Pore and fracture Pressures by optimizing mud properties and flow rates etc.
  - Bit Hydraulics for better ROP and Hole Cleaning.
- 15.10 Tripping Speed and Casing Speed Optimization by swab and surge analysis

- 15.11 Training and development of OIL in-house engineers in Drilling Optimisation, model building, well engineering applications and Pore pressure prediction

## 16. Well testing Equipment and Services

16.1 Bidder must have minimum 5 (five) years experience and at least 3 (Three) wells in the deepwater environment in the water depth range as defined with equipment, consumables and services, operators and others as per broad scope of work to reputed E&P companies.

### Broad Scope of work: Well Testing Equipment and Services

16.2 Bidder to provide all necessary equipment, supervision, expertise, labour and services to provide and operate well testing equipment and services suitable for deepwater environment and for the water depth range as defined including, but not limited to, the following:

16.3 Sub Sea Test Tree (SSTT) and associated systems and accessories

16.4 Production Testing Surface (PTS) equipment and associated systems and accessories

16.5 Surface and Bottom hole data acquisition and PVT services

16.6 Slickline services and associated services like Bridge Plug setting and others

16.7 Tubing Conveyed Perforation (TCP) – Drill Stem testing (DST) Equipment and Services

16.8 Qualified and Experienced Supervisors and Personnel for SSTT/PTS/Slickline/TCP-DST and other associated services

16.9 Well testing Design services and Specialist for the entire well testing sequencing and operations

16.10 **Optional on Call Out Basis:** CTU and Nitrogen Pumping equipment and services and Wellbore clean out tools and services

17.0 Supply of Drilling Bits on Consignment Basis.

17.1 Scope of Work :

Bidders to provide the following sizes of bits with nozzles on consignment basis. Approximate specifications and number required for various bits are given below. Bidder is requested to verify the compatibility of the bits to be run along with bidder provided SDMM/ RSS.

Sl no	Size	IADC Code	Approximate Number
1	26" Jets 3x24/26	TCR 1-1-7/1-2-7	1+1
2	17.1/2", jets 22,20,18	TCR 1-1-1/1-2-7/1-3-7/2-3-7	1+1+2+2
3	12.1/4"; Jets 15,14,16	TCR1-3-7/PDC 6x19/ TCR 4-3-7/5-3-7/ PDC 5x15	3+1+3+1+1
4	8.1/2"; jets 12.13.14,15	TCR 1-3-7; 4-3-7;5-3-7; PDC 5x16, 5x13 with 6/7 jets for optimum hydraulics	3+2+2+1+1
5	6"	TCR 1-3-7, 4-3-7,5-3-7	4+2+2

17.2 The bits supplier must be from one of the following companies for

A. TCR Bits:

(i) Smith

(ii) Hughes Christensen

(iii) Halliburton

(iv) NOV

(v) Varel

(vi) Tix Corporation

B. PDC Bits.

i) Smith

ii) Hughes Christensen

iii) Halliburton

iv) NOV

**18. Supply of Casings** : Bidder to indicate if they are in a position to supply casings as indicated in the Well program vide **Appendix 4** below with delivery time and payment term etc. Company may exercise the option while floating the tender based on delivery time of casings.

**Address for Communication**

Interested Bidders are requested to visit our website [www.oil-india.com](http://www.oil-india.com) for further details on the above and submit their Expression of Interest latest by 18.11.2014 till 17:00 Hrs ( IST) to the following address :

General Manager (GSc, CEMG)  
For Sr. Manager (C&P) (CEMG)  
Oil India Limited, FC-24, 5<sup>th</sup> Floor,  
IT Infrastructure Building, Sector-16A,  
NOIDA-201301 [email ID: [cemg\\_c&p@oilindia.in](mailto:cemg_c&p@oilindia.in); [rupakkalita@oilindia.in](mailto:rupakkalita@oilindia.in)]  
For any technical clarifications, interested Bidders may contact:

Mr. Ghana Gogoi  
Head-CEMG(Project)  
Oil India Limited, FC-24, 5<sup>th</sup> Floor,  
IT Infrastructure Building, Sector-16A, NOIDA-201301  
e-mail id: [ghana\\_gogoi@oilindia.in](mailto:ghana_gogoi@oilindia.in)



### Appendix 1

**Current and Potential workload: Please fill up the following table with relevant data and documentary evidence**

Client/ Project/ Nature of service	Progress as on date of submissio n of EOI	Contract value Million USD	Type of activity	Peak man power	Role	Award date	Planned Completi on date	Was the mobilizati on time and as scheduled	Major down time and reasons

### Appendix 2

**Past Contract Details: Please provide the past 5 years contract details in the following format with documentary evidence where ever required.**

Client/ Project/ nature of services	Mobilization date vs contractual mob date	Contract value Million USD	Type of activity	Peak man power	Role	Award date	Planned completion date vs Actual completion date	Was the Bidder ever blacklisted due to bad performance/ non mobilization/ non adherence to any Operator's contractual terms and conditions/ breach of contract

### Appendix 3

Documentary evidence showing that the Bidder has a comprehensive Quality, Health, Safety and Environmental management system in place which demonstrates adherence to Bidder's QHSE commitments and Regulatory requirements. Bidder requested to provide the Safety statistics Details for the last 3 years.

Bidder required to provide a brief with copies of certification wherever applicable need to be submitted covering, but not limited to, the following salient features:

1. The Bidder's HSE Management System including risk register
2. The Bidder's Quality Management System and Procedures
3. Process Safety Information and Hazard Analysis – at workshop and on Rig and other work areas
4. Standard Operating Procedures
5. Lifting Gear Policy, standards and procedures
6. Training and Competence standards
7. Management of Subcontractors
8. Equipment Integrity standards
9. Permit-to-work system
10. Management of Change
11. Incident Investigation and Analysis
12. Emergency Planning and Response
13. Occupational Health
14. Drugs and Alcohol
15. Security
16. QA/QC standards and procedures
17. Audit and Review

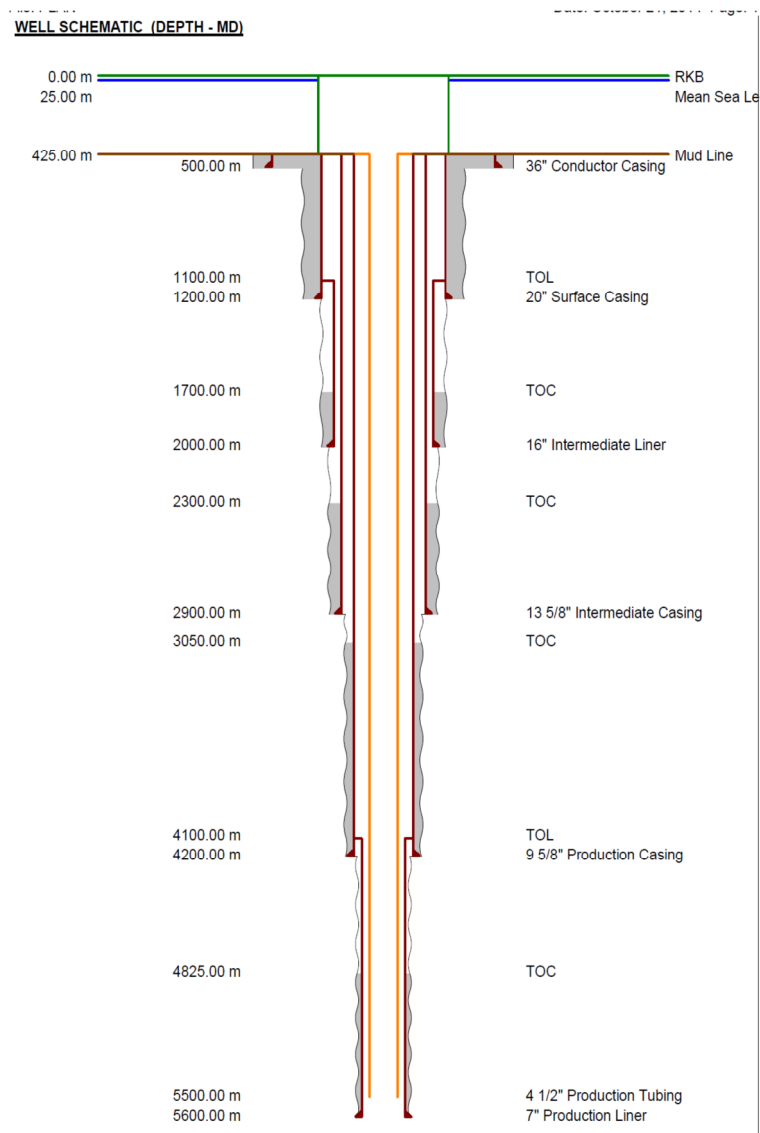
**Annexure 1****PROPOSED DRILLING SCHEDULE :**

<b>Block</b>	CY-OSN-2009/2
<b>Likely commencement date</b>	31 May 2015
<b>Drilling Programme</b>	1 (one) well
<b>Water Depth Range</b>	400 to 500 meters
<b>Drilling Depth</b>	Average 5600 meters Below Mud Line (BML)
<b>Pressure and Temperature</b>	Preliminary studies indicative of Normal Pressure and Temperature regime
<b>Supply Base</b>	Kakinada and Tuticorin on the East coast is under consideration. However, the base/s could be anywhere in the East coast to provide services to save time.

## APPENDIX – 4

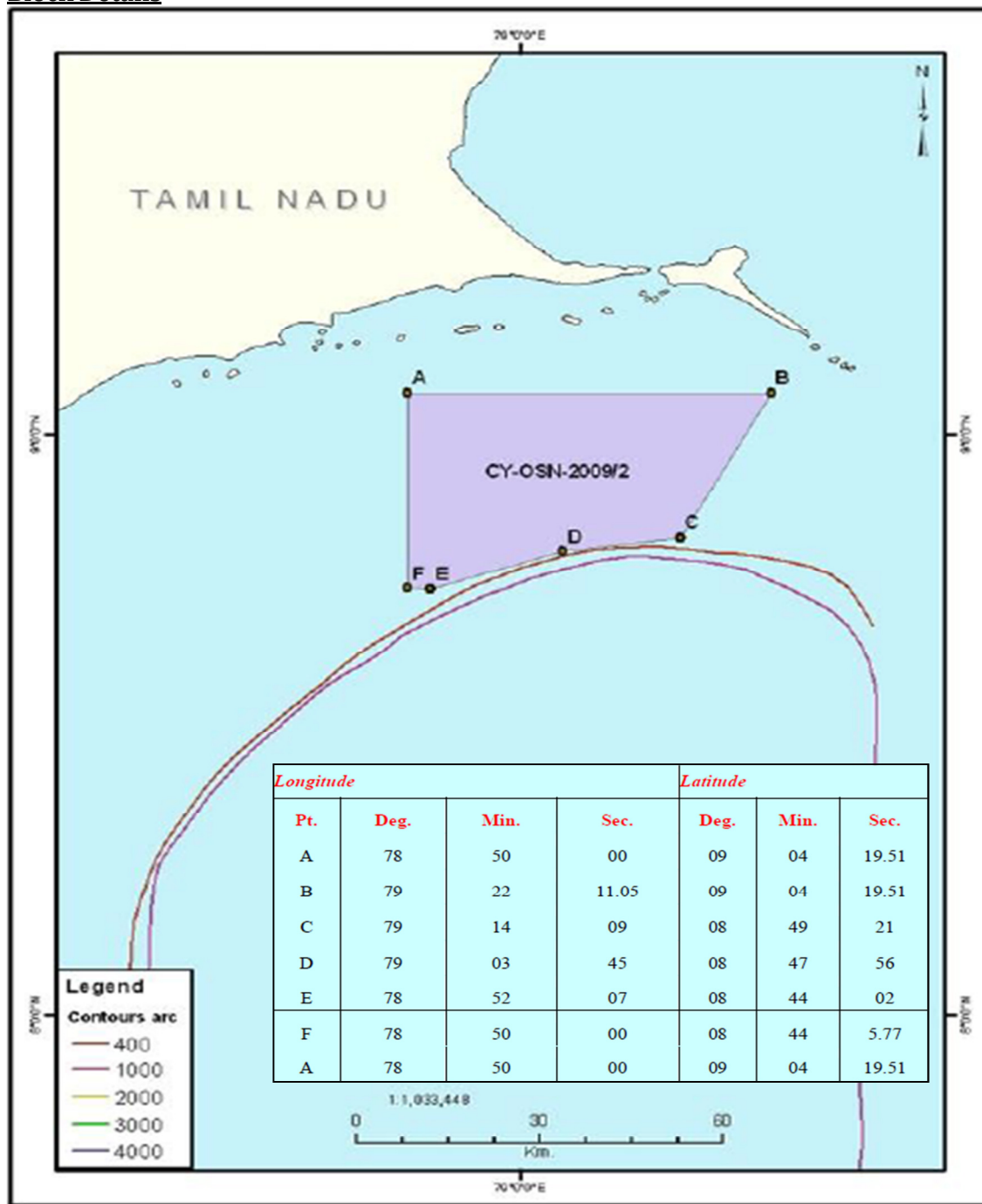
**PROVISIONAL WELL DETAILS**

The tentative casing scheme for the wells is indicated below:



The casings will be Seamless, Threaded & Coupled Casings conforming to API 5CT (latest) with API monogrammed except for 16 " ( 406.40 mm) and 13.5/8" (346.08 mm) casing:

<b>Casing</b>	<b>Hole Size (in)</b>	<b>Size (in)</b>	<b>Weight (ppf)</b>	<b>Grade</b>	<b>Approx Quantity</b>
<b>Conductor</b>	Jetted	36"	533	X56	
<b>Surface</b>	26"	20"	133	X56	
<b>Intermediate</b>	17-1/2" X20"	16"	84	P110, Premium/ Semi-Premium Connection	1800m
<b>Intermediate</b>	14-1/2"X17-1/2"	13-5/8"	88.2	P110, Spl Clearance & Spl./ Alt. Drift, Premium gas tight Connection	5000m
<b>Intermediate(production)</b>	12.1/4"	9.5/8"	53.5	x P110, Spl./ Alt. Drift, Premium gas tight Connection	7600m
<b>Liner</b>	8.1/2"	7"	32	P110, Spl./ Alt. Drift, Premium gas tight Connection	1700m
<b>6" Contingent Hole</b>	6"	4 1/2"	12.6	P110, Premium gas tight Connection	450m

**Block Details****INDEX MAP OF BLOCK CY-OSN-2009/2****X End of EOI X**