Reliance Exploration and Production DMCC

EXPRESSION OF INTEREST
(UNDER INTERNATIONAL COMPETITIVE BIDDING)
FOR
Deep Water Drilling Rig , Material , Equipment, Personnel & Drilling Services
(REP DMCC/E&P/EOI/2008-2)

Reliance Exploration and Production DMCC (REP DMCC), a subsidiary of Reliance Industries Limited (RIL) – India's largest private sector company on all major financial parameters with turnover of USD 34.7 billion, cash profit of USD 6.3 billion and net profit of USD 3.8 billion, net worth of USD 20.3 billion and total assets of USD 37.3 billion.
RIL is the only private sector company from India to feature since 2004 in the Fortune Global 500 list of 'World's Largest Corporations' and ranks amongst the world's Top 200 companies in terms of profits.

Reliance Exploration and Production (REP DMCC), as operator, invites Expression of Interest (EOI) for the Timor Block –K offshore block in "Democratic Republic of Timor – Leste " from reputed and experienced contractors/ bidders for the following activities.
Contractors/ bidders should be familiar with latest trends in technology areas of Oil & Gas exploration and production.

1	REPDMCC/EXP/EOI/2008-2	Deep Water Drilling Rig
2	REPDMCC/EXP/EOI/2008-2	Material , Equipment, Personnel & Drilling Services

The blocks are located in "Democratic Republic of Timor – Leste " . REP DMCC envisages drilling of One (1) Exploratory well in this block with target depth of 6000 meters.

Interested bidders are requested to visit our website www.ril.com for further details on the above and submit their expression of interest within 28 days of publication of this advertisement along with following details in 2 hard copies, 2 CDs and through E-mail on E-mail ID eoiresponse2008-2@ril.ae :

1. Complete administrative and financial details of the company with audited annual reports for last 3 years.
2. Organizational chart and experience & qualification of key personnel.
3. Details of major equipment owned by Contractors for Services / Categories.
4. List of similar contracts executed during last 3 years with past performance.
5. Brief on Health, Safety, Environment, Quality Assurance and Control systems followed.
6. Any other information that will establish that the company is a competent service provider.

The envelope should be superscribed as REP DMCC/E&P/EOI/2008-2 along with Category Reference Number.

Address for Communication:
Sr. Vice President (Procurement & Contracts)
Reliance Exploration and Production DMCC
Al Falasi Residence – 1st Floor, Centre Point Apartment Building,
Bur Dubai, P.O. Box 125307, Dubai, UAE
Tel No: 00971- 4- 3522332 , Fax : 00971-4-3518875

1. MINIMUM SPECIFICATIONS FOR DEEP WATER RIG FOR TIMOR BLOCK-K OPERATIONS

The rig is intended to be deployed in Timor waters for drilling exploratory wells. The following are the minimum specifications for deep-water rig. Detailed specifications would be finalized with the vendors who meet the minimum specifications listed below.

Sr. No.	Item Description	Requirement
1	Type of Rig	Drill Ship or Semi Submersible
2	Water Depth Rating	Rig should be capable of Drilling in water depth up to 1800 m.
3	Station Keeping	Dynamic Positioning System. DP-2 with double redundancy. The system should be complete along with all the accessory equipment and instrumentation for position reference and control system. The system should capable of maintaining vessel position in the extreme weather conditions in Timor offshore with adequate backup power and manual override. Excluding the cyclonic period, the Met ocean conditions are: 1) 4 m seas 2) 40 knots wind speed 3) 3.8 knots surface current reducing to 0.2 knots at seabed.
4	Drilling Depth	Rig should be capable of drilling Exploratory & Development wells including Directional wells (in water depth stated above) to the total depth of 6000 m.
5	Variable Deck Load & Draft	Rig should have sufficient VDL capacity. Vendors to supply details of VDL during : -Drilling -Transit -Survival The unit should be capable of storing well consumables, casing pipes, chemicals & other bulk material in addition to rig equipment & material to allow uninterrupted operations. During Field moves & Ocean moves no back loading of material should be required.
6	Hoisting Equipment	Rig should be equipped with suitable rating & size of equipment to drill & complete the above wells.
7	Rotary Equipment	Rotary Table : Rig should be equipped with independent drive 49 ½" Rotary Table of sufficient capacity and static load

		rating. Casing Insert Bowls of all sizes are required to be provided. Top Drive System : Adequate capacity Top Drive should have capability of delivering maximum RPM of 250 and Torque of 35,000 ft-lbs at continuous torque. Iron Roughneck : Provision of Iron Roughneck capable of handling TJ sizes of 3-1/2" to 9-1/2" tubular is required. Back-up equipment : To enable uninterrupted operations, rig should have availability of standby Kelly along with Kelly spinner, Swivel, Lower & Upper Kelly cock.
8	Pipe Handling System	Rig should be equipped with automated and efficient Pipe Handling system capable of handling all pipe sizes required for the program. Vertical pipe handling system should enable drill pipes, drill collars and BHA components to be rack back as an offline activity.
9	High Pressure Mud System	Mud Pumps : The Rig should have minimum 3 nos. of 1600 HP Mud pumps complete with Pre-charge pumps ,Pulsation dampeners, Reset relief valves, Suction/Discharge strainers, Suction dampeners, etc. , having Pressure rating of 7500 psi. HP Mud Lines : 7500 psi WP Discharge line, Stand pipe & manifold and Rotary hose. Cement lines & manifold: 15 M WP cement line and manifold is required.
10	Mud storage capacity & Mixing System	The rig system should allow efficient mixing and use of SBM or WBM system. Minimum storage capacity required are : Active Pits - 5000 bbls Reserve Pits - 5000 bbls Brine Storage - 3000 bbls Base Oil Storage - 3000 bbls Mud Shear System : Rig should be equipped with Jet Shearing (HP) device including arrangement in the pits for fast shearing of WBM or SBM polymers. Hoppers : Minimum 2 nos. of hoppers for mixing chemicals and a deck hopper for mixing Salt along with suitable centrifugal pumps should be provided. Line arrangement should enable suction from and

		discharge to each tank. Transfer Pumps : Rig should be provided with suitable transfer pumps with time switches and flowmeter. Trip Tank : Trip tank of suitable capacity complete with centrifugal pump and mud level indicator having sensivity of ½ bbl readable from Driller's station should be provided. Sack Room : Adequate capacity sack storage room to store mud chemicals & LCM material along with Fork Lift for shifting the material.
11	Storage Capacity for other items	Rig should have a minimum storage space for the following to allow uninterrupted operations in the remote areas and also during bad weather season when supply vessels can not deliver material / bulk to the Rig. (a) Drill-water : 10,000 bbls (b) Pot-water : 3,000 bbls (c) Fuel oil : 5,000 bbls (d) Lube oil : as required (e) Bulk Cement : 9000 cu. ft. (f) Barite / Bentonite : 9000 cu. ft.
12	Solids Control Equipment	Adequate number and type of latest & advanced version solids control equipment including the items listed below are required on the Rig. The system should efficiently handle WBM and/or SBM using screens 20-250 mesh sizes and a flow rate in the range of 1500-1800 GPM. (a) Linear motion shaker with scalpers (b) Linear motion Mud cleaner (c) HP low volume water or base oil screen spray system (d) Degasser (e) Centrifuge (f) Poor Boy Mud/Gas separator (g) Degasser (h) Desilter
13	Subsea BOP stack and Marine Riser Equipment	Subsea BOP Stack : The Rig should be equipped with 18 ¾"x 15M sour treated/H2S trim BOP stack .The stack should have minimum 4 Ram cavities and 2 Annular Preventors

		(one with LMRP). The Stack Connector should be compatible with Vetco H-4 profile and should have Hydrate prevention seal. The Connector should have provision of funnel down as well as funnel up arrangement. Ram should have locking provision and adequate hang-off capacity. Stack should have minimum 4 nos. of 4" Choke & Kill outlets with two valves in each line as per API-RP-53. The BOP Accumulator and control system should meet the requirement of latest relevant API standards. LMRP and Riser System : The system should be capable of deployment in depths mentioned above LMRP connector should have capability of high angle release. 21" OD x 70-80 ft.Length Riser System should include Telescopic Joint, Flex/Ball Joint, Electro Hydraulic (MUX) Control Pods , Diverter system along with fast make up handling tools & accessories etc. Riser should have provision of at least four lines for Choke, Kill, Booster & Hydraulic fluid. C, K & B line should preferably have 4"ID. The equipment should meet the requirement of latest API standards. Riser should be equipped with suitable Buoyancy system for operations in the above stated water depths. Choke & Kill Manifold : Sour treated/H2S trim, 15M WP C & K manifold and lines along with Control Panel as per API stds. BOP Test Unit : Unit be capable of testing stack to 15000 psi and should have chart recorder.
14	Moon Pool	The rig should have large size moon pool to enable efficient BOP Running in / Pulling out operations.
15	Motion Compensator and Riser Tensioner System	The unit should be equipped with adequate capacity Motion Compensator and Riser Tensioner system to deploy and efficiently operate the unit with 16 ppg mud in Timor waters round the year in weather conditions prevailing in the region.
16	Data Recording & Transmission System	Unit should be equipped with advanced data acquisition, recording and transmission system with capability of Real time transmission of all drilling and vessel positioning data to base at Company office. It will also be required for real time third party service.
17	Communication Equipment	Adequate communication equipment as per the requirement of International Marine regulation and

		practices are to be provided with the unit for the following (a) Rig—Shore base communication. (b) Short range field communication. (c) Ground to air communication. (d) Emergency distress communication. (e) Rig P & A system (f) Facsimile, Telex equipment. (g) E-mail (h) Photocopier
18	Helicopter System	Helideck should be suitable for landing / take-off of Silkorsky S-61or MI-8 or equivalent Helicopters.
19	Safety , Fire-Fighting and Life Saving Equipment	Rig should be provided with all Safety, Fire-Fighting and Life Saving equipment as per the requirement of SOLAS, IMO and other relevant standards / regulation.
20	Deck Cranes	Rig should be equipped with 3 to 4 deck cranes located at Forward and Aft in Star board and Port side of adequate capacity (50 to 75 T). Boom length to cover all deck area and Rig floor. Cranes should be able to off load from boats to lift material including containers from both side of the rig . Rig should have suitable crainage arrangement for efficient handling of Riser joints from deck to Rig floor or vice versa while running in or pulling out Risers. Considerations would be given to separate self-contained riser handling system.
21	Accommodation	Rig should have more than 130 beds in single, double or four man rooms. Provision of around 45 beds for operator and its service personnel is required. In addition minimum three Offices along with all communication facilities and desktop computer with internet connection and printer for Company men and Service company engineers are required.
22	Rig Power & Management System	Adequate number of Engines, Generators, Compressors and SCR system to supply power to Rig equipment and DP system are to be provided. Suitably powered and distributed emergency generator should be provided.
23	Handling Equipment for Tubulars	Casing policy envisaged to drill the wells would require use of casing sizes 36”, 32”, 30”, 20”, 16”, 14”, 13 3/8” , 10 ¾”, 9 5/8”, 7” and 5”. All the handling tools for these sizes are required to be provided. Handling tools for tubular sizes is to be provided.

24	Fishing Tools	Fishing tools like Overshots, Junk subs, Reverse circulating Junk Baskets, Junk Mills, Magnets and Safety Joints for Rig provided tubulars in various hole sizes (26", 17 ½", 16", 13", 12 ¼" , 8 ½" , 6") are to be provided with the Rig.
25	Additional Features	1 Operator intends to maximize the extent of concurrent activities. 2 The rig should be designed to contain any onboard SBM spillage. Mud Vac should be provided for recovery of spilled oils. 3 Mud pit area should be suitably ventilated. 4 Top of mud pits should be plated to minimize the SBM vapours. 5 Suitable mounting facilities should be provided for attachment of flare booms. 6 The Rig should have flow lines for well testing on Port & Starboard sides to the flare boom locations and water spray for cooling. 7 The rig should have sufficient area for well testing surface spread. 8 The Rig should be equipped with the following sizes of DP and DC (exact quantities will be advised later) DP 6 5/8", 5 ½", 5", 3 ½", 2 7/8" HWDP 5" , 3 ½" DC 9 ½", 8", 6 ½", 4 ¾", 3 1/8"

2. Material, Equipment, Personnel & Service Requirement for Drilling:

Sr. No	Category	Sub Code	DESCRIPTION
1	**Tangibles**	T1	**Casings, Tubings & Accessories:** a. Exploratory Casings & Accessories b. Tubings & Accessories c. Casings X-Overs
		T2	**Sub-sea Wellhead & Accessories** a. Deepwater Sub-sea 15 k Wellheads (includes GRA, Mud Mats & R/tools)
		T3	Liner Hangers & Accessories
		T4	Drill Bits
		T5	Solid Expandable Tubulars
2	**Intangibles**	I1	Pre-drilling survey & investigations Bathymetry, tidal variation, shallow hazards, seabed profile, burial metal objects, drop core samples etc. a. Geo-Physical Surveys b. Geo-Technical Surveys
		I2	a. **Oceanographic surveys** - Current wave measurement (pre drill) b.Marine environmental hind casting studies - wave, current, wind, etc. records. c.Environment clearances. d. Weather Forecasting.
		I3	**Drilling Rig & related services** a. Offshore Drilling rig with Water Depth Drilling Capability- 1500-2000m.Drilling Depth Capability – 6000m. Complete with all the rig equipments, offices, stores and accommodation for the rig/REP DMCC / Third party personnel etc. b. Rig Positioning Services c. Real Time Current Monitoring Services & Met-ocean data measurements d. Rig Positioning QC / Validator
		I4	**Helicopter Services**
		I5	**AHTS, OSVs, PSVs & Standby boats:** a. AHTS (15000-20000 BHP) - 2 nos. b. Safety Stand-by Boats - 1 nos.
		I6	**Directional Drilling & MWD / LWD Services:** a. Directional Drilling Services & Associated tools b. MWD / LWD Services (includes PWD) c. Mud Motors (including Turbines) d. Rotary Steerable Systems e. Borehole Surveying - EMS Survey / Gyro Survey f. Wellbore Surveying - Inclination Only
		I7	**Casing & Tubing Running Services:** a. Casing & Tubing Running Services b. Casing & Tubing Centralisers

		I8	**Drilling, Fishing, Milling & P&A Tools:** a. Drilling tools - Drilling Jars, Reamers etc. b. Fishing & Milling tools (Overshot, Spears etc.) c. P&A tools
		I9	Hole Enlargement Tools
		I10	**Remotely Operated Vehicles (ROV's):** Work Class ROV system for Mid water (WD upto 2000 m).
		I11	**Drilling Fluids Engg & Services:** a. Drilling Fluid Services b. Procurement of Barite, Bentonite & other chemicals c. Base oil for SBM d. DKD / MOTF or eqvt Unit e. Tie-up with Mud Testing Lab (onshore) f. Solid control - Centrifuge unit & Filtration unit g. Aqua Shear Unit (LP Jet / Shearing Device)
		I12	Supply of Cement
		I13	**Cementing Services & Accessories:** a. Cementing Unit (offshore electric driven) & Silos b. Cementing Services & chemicals c. Centralisers - all types d. Float eqpt (plugs & plug launching sys) e. Cementing Lab (at shore base)
		I14	**Mud Logging Services**: With all the required standard sensors and equipment, with recording and display facility at various stations along with data engineer, mud logger, pore pressure engineer, sample catcher.
		I15	**Wireline Logging :** a. Open Hole Electro Logging b. Cased Hole Electro Logging c. Tubing Conveyed Perforations (TCP) d. Slickline Services
		I16	**Subsea Well head Running & Maintenance Services**
		I17	**Well Testing & DST (Includes Downhole & Surface testing eqpt)** a. 15 K Testing Services for Deep water Rigs
		I18	Coiled Tubing Services
		I19	Nitrogen Services
		I20	Coring Services & Core bits a. Core Analysis Services
		I21	PVT Sampling Services & Lab Analysis
4	**Personnel**	P1	**Wellsite Supervision & Timor Base Personnel:** **Wellsite Supervision:** Day Companyman (3-4 months) – 2 positions Night Companyman(3-4 months) - 2 positions Drilling Engineer – 2 positions Matsman (local) - 2 positions Mud Supervisor(3-4 months) - 2 positions **Timor Base Personnel:** Drilling Superintendent (3-4 months) – 1 position Sr Drilling Engineer - 1 position Drilling Engineer – 1 position Materials co-ordinator – 2 position (1 local & 1 Expat)

			Office Secretary – 1 position
5	**Environment & Safety**	ES1	Pre-Hire Inspection & Audits of Rig, Supply vessel, Helicopter service.
		ES2	EIA / Base Line Audit
		ES3	H2S - Monitoring & Protection Equipment -Standard H2S Monitoring and protection equipment and personnel.
		ES4	Blow-Out (Contingency Plan)
		ES5	Waste Management
		ES6	Local Medical Facilities - Medical facilities for REP-DMCC and third party personnel.
		ES7	Emergency Evacuation
6	**Shore base ,Materials & Logistics**	SB1	Setting of shore base a. Hiring of warehouse & offices b. Office furniture
		SB2	Port facilities
		SB3	Mud Mixing facility (Mud plant) & storage at shore base
		SB4	Cement Cutting facility
		SB5	Casing / Tubing Inspection & NDT
		SB6	V Sat communication equipment for voice and data transfer from and to rig site to Base office in Timor and Mumbai.
		SB7	Customs &Freight Forwarding Agent
		SB8	Cranes at supply base and rig site for loading and offloading REP-DMCC/ Third party material / equipment.
		SB9	Light vehicles to support operations at supply base.
		SB10	Medical Tie-up services
		SB11	Logistics Contractor - freight forwarding transport etc
		SB12	Base & Location equipment Fork lift, chain tractor , dodger etc for supply base
		SB13	Bulk silos - barite, bentonite and cement including Bulking equipments
		SB14	Mud water and fuel storage tanks
		SB15	Casing Racks
		SB16	Baskets, containers, pallets etc. for transporting materials to supply vessel for rig
		SB17	Fuel supply to supply vessel
		SB18	Lifting gears like slings shackles etc. duly certified.
		SB19	Local workshop / lab facilities
		SB20	Potable water supply to supply base.