



**Reliance
Exploration and Production DMCC**

**EXPRESSION OF INTEREST
(UNDER INTERNATIONAL COMPETITIVE BIDDING)
FOR
DRILLING SERVICES INCLUDING EQUIPMENT, MATERIAL & PERSONNEL FOR EXPLORATORY DRILLING
(REP DMCC/EOI/TL/2009-1)**

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 a turnover of US\$ 28.85 billion, cash profit of US\$ 4.41 billion, net profit US\$ 3.08 billion and net worth of 24.92 billion.

RIL is the first private sector company from India to feature in the Fortune Global 500 list of 'World's Largest Corporations' and ranks 117th amongst the world's Top 200 companies in terms of profits. RIL ranks 75th in the Financial Times FT Global 500 list of the world's largest companies.

Reliance Exploration and Production (REP DMCC), as operator, invites Expression of Interest (EOI) for the Timor Leste offshore block – K located 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/TL/2009-1/DRILLING	Deep Water Drilling Rig, Drilling Services, Equipment, Material & Personnel
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The block is 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 15 days of publication of this advertisement along with following details in 2 hard copies, 2 CDs and through E-mail on E-mail ID eoiresponse.eandp@ril.com :

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/EOI/2009-1 along with Category Reference Number.

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MINIMUM SPECIFICATIONS FOR DEEP WATER RIG FOR EXPLORATORY DRILLING OF WELL IN CONTRACT AREA –K, TIMOR LESTE

The rig is intended to be deployed in Timor waters for drilling exploratory well. 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	<p>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:</p> <ol style="list-style-type: none"> 1) 4 m seas 2) 40 knots wind speed 3) 3.8 knots surface current
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	<p>Rig should have sufficient VDL capacity. Vendors to Provide details of VDL during :</p> <ul style="list-style-type: none"> -Drilling -Transit -Survival <p>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.</p> <p>During Field moves & Ocean moves no back loading of material should be required.</p>
6	Hoisting Equipment	Rig should be equipped with suitable rating & size of equipment to drill & complete the above wells.

7	Rotary Equipment	<p>Rotary Table :</p> <p>Rig should be equipped with independent drive 49 ½” (minimum opening) Rotary Table of sufficient capacity and static load rating. Casing Insert Bowls of all sizes are required to be provided.</p> <p>Top Drive System :</p> <p>Adequate capacity Top Drive should have capability of delivering maximum RPM of 250 and Torque of 45,000 ft-lbs at continuous torque.</p> <p>Iron Roughneck :</p> <p>Provision of Iron Roughneck capable of handling TJ sizes of 3-1/2” to 9-1/2” tubular is required.</p> <p>Back-up equipment :</p> <p>To enable uninterrupted operations, rig should have availability of standby Kelly along with Kelly spinner, Swivel, Lower & Upper Kelly cock.</p>
8	Pipe Handling System	<p>Rig should be equipped with automated and efficient Pipe Handling system capable of handling all sizes of tubulars and casings 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.</p>
9	High Pressure Mud System	<p>Mud Pumps :</p> <p>The Rig should have minimum 3 nos. of 2200 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.</p> <p>Rig with additional pump to boost riser, will be preferred.</p> <p>HP Mud Lines :</p> <p>7500 psi WP Discharge line, Stand pipe & manifold and Rotary hose.</p> <p>Cement lines & manifold:</p> <p>15 M WP cement line and manifold is required.</p>
10	Mud storage capacity &	<p>The rig system should allow efficient mixing and use of</p>

	Mixing System	<p>SBM or WBM system.</p> <p>Minimum storage capacity required are :</p> <p>Active Pits - 5000 bbls</p> <p>Reserve Pits - 5000 bbls</p> <p>Brine Storage - 3000 bbls</p> <p>Base Oil Storage - 3000 bbls</p> <p>Mud Shear System :</p> <p>Rig should be equipped with Jet Shearing (HP) device including arrangement in the pits for fast shearing of WBM or SBM polymers.</p> <p>Hoppers :</p> <p>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.</p> <p>Transfer Pumps :</p> <p>Rig should be provided with suitable transfer pumps with time switches and flowmeter.</p> <p>Trip Tank :</p> <p>Trip tank of suitable capacity complete with centrifugal pump and mud level indicator having sensitivity of ½ bbl readable from Driller's station should be provided.</p> <p>Sack Room :</p> <p>Adequate capacity sack storage room to store mud chemicals & LCM material along with Fork Lift for shifting the material.</p>
11	Storage Capacity for other items	<p>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.</p> <p>(a) Drill-water : 10,000 bbls</p> <p>(b) Pot-water : 3,000 bbls</p> <p>(c) Fuel oil : 5,000 bbls</p> <p>(d) Lube oil : as required</p>

		<p>(e) Bulk Cement : 9000 cu. ft. (f) Barite / Bentonite : 9000 cu. ft.</p>
12	Solids Control Equipment	<p>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.</p> <p>(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</p>
13	Subsea BOP stack and Marine Riser Equipment	<p>Subsea BOP Stack :</p> <p>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.</p> <p>Ram should have locking provision and adequate hang-off capacity.</p> <p>Stack should have minimum 4 nos. of 4" Choke & Kill outlets with two valves in each line as per API-RP-53.</p> <p>The BOP Accumulator and control system should meet the requirement of latest relevant API standards.</p> <p>LMRP and Riser System :</p> <p>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 five 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</p>

		<p>standards. Riser should be equipped with suitable Buoyancy system for operations in the above stated water depths.</p> <p>Choke & Kill Manifold :</p> <p>Sour treated/H2S trim, 15M WP C & K manifold and lines along with Control Panel as per API stds.</p> <p>BOP Test Unit :</p> <p>Unit be capable of testing stack to 15000 psi and should have chart recorder.</p>
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	<p>Adequate communication equipment as per the requirement of International Marine regulation and practices are to be provided with the unit for the following</p> <ul style="list-style-type: none"> (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 Sikorsky S-61 or 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

		<p>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 .</p> <p>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.</p> <p>Considerations would be given to separate self-contained riser handling system.</p>
21	Accommodation	<p>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.</p> <p>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.</p>
22	Rig Power & Management System	<p>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.</p>
23	Handling Equipment for Tubulars	<p>Casing policy envisaged to drill the wells would require use of casing sizes 36", , 30", 20", 16", 14", 13 3/8" , 10 3/4", 11 3/4", 9 5/8", 7 5/8", 7" and 5". All the handling tools for these sizes are required to be provided.</p> <p>Handling tools for tubular sizes is to be provided.</p>
24	Fishing Tools	<p>Fishing tools like Overshots with different grapples, Junk subs, Reverse circulating Junk Baskets, Junk Mills, Magnets, fishing jars, bumper sub, spears and Safety Joints for Rig provided tubulars in various hole sizes (26", 17 1/2", 16", 13", 12 1/4" , 8 1/2" , 6") are to be provided with the Rig.</p>
25	Additional Features	<ol style="list-style-type: none"> 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

		<p>and water spray for cooling.</p> <p>7 The rig should have sufficient area for well testing surface spread.</p> <p>8 The Rig should be equipped with the following sizes of DP and DC (exact quantities will be advised later)</p> <p>DP 6 5/8", 5 1/2", 5", 3 1/2", 2 7/8"</p> <p>HWDP 5", 3 1/2"</p> <p>DC 9 1/2", 8", 6 1/2", 4 3/4", 3 1/8"</p>
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List of the Services, Material and Personnel for expected drilling of Exploratory well in the Contract Area – K, Timor Leste :

Code	Description
REPDMCC/EOI/TL/DR/1	Supply of Casing, Tubing & Accessories
REPDMCC/EOI/TL/DR/2	Supply of Deep Water Subsea Wellheads including GRA & Mudmats
REPDMCC/EOI/TL/DR/3	Supply of Liner Hanger & Accessories
REPDMCC/EOI/TL/DR/4	Supply of Solid Expandable Tubular
REPDMCC/EOI/TL/DR/5	Supply of Drill Bits
REPDMCC/EOI/TL/DR/6	Supply of Oil Well Cement
REPDMCC/EOI/TL/DR/7	Supply of Fuel to Supply Vessel
REPDMCC/EOI/TL/DR/8	Supply of Potable water to supply base
REPDMCC/EOI/TL/DR/9	Oceanographic Survey for Current Wave Measurement (Metocean Survey)
REPDMCC/EOI/TL/DR/10	Weather Forecasting Services
REPDMCC/EOI/TL/DR/11	Real Time Current Monitoring & Metocean Data Measurement
REPDMCC/EOI/TL/DR/12	Well Planning & Design Services
REPDMCC/EOI/TL/DR/13	Drilling Rig, related Equipments and Rig Crew
REPDMCC/EOI/TL/DR/14	Rig Positioning Services
REPDMCC/EOI/TL/DR/15	Rig Positioning QC / Validation Services
REPDMCC/EOI/TL/DR/16	AHTS (15,000 – 20,000 BHP) / PSVs
REPDMCC/EOI/TL/DR/17	Safety Stand-by Vessel
REPDMCC/EOI/TL/DR/18	Drilling & Completion Fluid Services along with Supply of Mud Chemicals & Additives for WBM/SOBM
REPDMCC/EOI/TL/DR/19	Cementing Services (including slurry design, Cementing Lab, Bulk Handling Plant & Silos) along with supply of Cementing Chemicals & Hardware
REPDMCC/EOI/TL/DR/20	Directional Drilling (Mud Motors & Rotary Steerable Systems) & MWD / LWD (including PWD) Services
REPDMCC/EOI/TL/DR/21	Well bore / Bore hole Survey Services
REPDMCC/EOI/TL/DR/22	Mud-Logging Services
REPDMCC/EOI/TL/DR/23	Electro-Logging Services
REPDMCC/EOI/TL/DR/24	Well Testing (Surface & Down Hole) Services

REPDMCC/EOI/TL/DR/25	Fishing, Milling, Plug & Abandonment Tools Services
REPDMCC/EOI/TL/DR/26	Drilling Tools Services
REPDMCC/EOI/TL/DR/27	Casing & Tubing Running Services
REPDMCC/EOI/TL/DR/28	Solid Control Equipment & Services (including filtration)
REPDMCC/EOI/TL/DR/29	Supervising and performing Completion, Perforating, Fracturing
REPDMCC/EOI/TL/DR/30	Completion Services
REPDMCC/EOI/TL/DR/31	Coil Tubing Services
REPDMCC/EOI/TL/DR/32	Nitrogen Services
REPDMCC/EOI/TL/DR/33	Stimulation Services (Propant, Chemicals and Additives)
REPDMCC/EOI/TL/DR/34	Slickline Services
REPDMCC/EOI/TL/DR/35	Mud Cooler Services
REPDMCC/EOI/TL/DR/36	H2S Services
REPDMCC/EOI/TL/DR/37	Coring Services
REPDMCC/EOI/TL/DR/38	Sand Control Services
REPDMCC/EOI/TL/DR/39	Pressure Volume & Temperature (PVT) Sampling & Laboratory Analysis
REPDMCC/EOI/TL/DR/40	Hole Enlargement Tools Services
REPDMCC/EOI/TL/DR/41	Aqua Shear Unit Services
REPDMCC/EOI/TL/DR/42	MPD Services
REPDMCC/EOI/TL/DR/43	Core Analysis Services
REPDMCC/EOI/TL/DR/44	Remote Operated Vehicle Services (Work Class ROV for Mid water (WD up to 2000 mtr)
REPDMCC/EOI/TL/DR/45	Pre-Hire Inspection & Audit of Rig, AHT, Supply Vessel, Helicopter
REPDMCC/EOI/TL/DR/46	V-Sat Communication for voice and data transfer between Rig, Base office in Timor & Mumbai
REPDMCC/EOI/TL/DR/47	Machine Shop Assistance
REPDMCC/EOI/TL/DR/48	Explosives handling & Logistic Services
REPDMCC/EOI/TL/DR/49	NDT / Inspection Services
REPDMCC/EOI/TL/DR/50	Reservoir Estimation Services
REPDMCC/EOI/TL/DR/51	Helicopter Services

REPDMCC/EOI/TL/DR/52	Environment Rapid Risk Assessment Services
REPDMCC/EOI/TL/DR/53	EIA Studies
REPDMCC/EOI/TL/DR/54	Medical Facilities
REPDMCC/EOI/TL/DR/55	Services for Emergency Evacuation
REPDMCC/EOI/TL/DR/56	Waste management Services including Drill cuttings, Drilling Waste & Hazardous Waste disposal
REPDMCC/EOI/TL/DR/57	Supply Base set up & Management Services
REPDMCC/EOI/TL/DR/58	Mud Plant & Storage Services at shore base
REPDMCC/EOI/TL/DR/59	Storage tanks for Mud, Water and Fuel
REPDMCC/EOI/TL/DR/60	Casing Racks
REPDMCC/EOI/TL/DR/61	Baskets, Containers, Pallets for transportation of material to supply vessel / rig
REPDMCC/EOI/TL/DR/62	Services of Crane, Forklift & Chain Tractor, dodger, Lifting gears like Slings & Shackles etc. for Supply base Operation
REPDMCC/EOI/TL/DR/63	Fabrication, Civil, Electrical and Mechanical Support Services
REPDMCC/EOI/TL/DR/64	Vessel Tank Cleaning Services (Solid & Liquid Bulk)
REPDMCC/EOI/TL/DR/65	Warehousing (Open and Closed)
REPDMCC/EOI/TL/DR/66	Material Handling, Manpower and Stevedoring Services
REPDMCC/EOI/TL/DR/67	Port and Vessel berthing support Services
REPDMCC/EOI/TL/DR/68	CHA / Freight Forwarding Services
REPDMCC/EOI/TL/DR/69	Transport Services
REPDMCC/EOI/TL/DR/70	Manpower Agencies for Personnel including Well site Supervision – Day Companyman, night Company man, Drilling Engineer, Matsman, Mud Supervisor Timor Base – Drilling Superintendent, Sr Drilling Engineer, Drilling Engineer, Material Co-Ordinator, Office Secretary, etc.
REPDMCC/EOI/TL/DR/71	Hospitality Services