

**OIL & GAS DEVELOPMENT COMPANY LIMITED**  
**PROCUREMENT DEPARTMENT, ISLAMABAD**  
**FOREIGN SECTION E**

(To be completed, filled in, signed and stamped by the principal)

**ANNEXURE 'A**

**Material** UPGRADATION OF DISK STORAGE CAPACITY OF OMEGA-II BY 720TB  
**Tender Enquiry No** PROC-FE/CB/EXPL/SDPC-4659A/2020  
**Due Date**  
**Evaluation Criteria** FULL

**SCHEDULE OF REQUIREMENT**

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY AIR	Total Price C & F BY AIR	Deviated From Tender Spec. If Any
1	DELL R740xd Disk Server or Equivalent 2x4114 10 core, 192GB of RAM, 2xM.2 120GB, 12x4TB 7200 RPM HD RAID 5, 3.5" HD	Number	5					
2	Dell Power Vault MD 1400 or Equivalent, 12x4TB Disk Storage, 3.5" HD	Number	10					
3	APC Rack Net Shelter: SX 42U 600mm Wide x 1070mm Deep x 1991mm Height ,without Sides – Black or Equivalent	Sets	1					
4	APC Air Containment Rear Assembly: for Net Shelter SX 42U and In-Row 600mm or Equivalent	Number	1					
5	APC Metered Rack: PDU Zero U 2G -( rack-mountable ) AC 200/208/230 V – 42 Output Connector(s) – 0U or Equivalent	Number	2					
6	KVM Switch: Dell DAV2216-G01 16-port analog, biodegradable to digital KVM switch: 2 local users, 1 power supply or Equivalent	Number	1					
7	Dell DMPUIQ-VMCHS-G01 for VGA, USB keyboard, mouse supporting virtual media, CAC \$ USB2.0 or Equivalent	Number	16					
8	Dell LED:18.5in, KMM DKMMLED185-001 – International English Keyboard or Equivalent	Number	1					
9	Dell Networking Cables, SFP+ to SFP+, 10GbE, Copper Twinax Direct Attach Cable, 3 Meter or Equivalent	Number	10					
10	3m Straight Through Cat6 Ethernet Cable Assembly, S/FTP gray LSZH	Number	5					
11	3m Straight Through Cat6 Ethernet Cable Assembly, S/FTP Red LSZH	Number	5					

**Note:**

- 1. Bid Validity:** Bid must be valid for **150 days** from the date of Technical Bid Opening
- 2. Bid Bond Amount:** USD 5,500/= (United States Dollar Five Thousand Five Hundred only) or equivalent Pak Rupees, **valid for 180 days** from the date of Technical Bid Opening
- 3. Evaluation Criteria:** - Full Consignment CPT By Air Islamabad
- 4. Delivery Period:** 120 Days from establishment of LC
- 5. Bidders** are advised to carefully read all the terms and conditions of the Tender Document available on OGDCL website which is an integral part of this Schedule of Requirement

**TERMS OF REFERENCE  
(TOR)**

**FOR**

**THE UPGRADATION OF HARD DISK  
CAPACITY OF EXISTING SDP SYSTEM**



**SYSTEM SERVICES GROUP  
SEISMIC DATA PROCESSING CENTRE  
EXPLORATION DEPARTMENT**

## **Objective**

OGDCL intends to enhance its Seismic Data Processing (Omega-2) potentiality by upgrading the Hard disk storage capacity of its existing Seismic Data Processing System. Detailed specifications of the Hardware is attached at Annex-V. The bidders should submit their offers keeping in view the technical requirements and other parameters as specified in this TOR.

## **Scope of work**

The scope of work consists of

- (i) Procurement of additional Hard Disk storage along with required services and support as a **Complete Package on Turnkey basis**.
- (ii) Configuration of the additional Hard Disk storage with existing Seismic Data Processing system setup.
- (iii) Installation/ Commissioning of additional Hard Disk storage and its execution with successful acceptance tests.
- (iv) Smooth operation of upgraded Seismic Data Processing System through Experts.
- (v) Warranty Support of supplied Hardware items for three (03) years. This will include Service and parts both, free of cost.
- (vi) All bidders must ensure that they meet the set forth standards and working experiences as per Annexes I, II, III and IV while submitting their Bids.
- (vii) A visit to the site may be arranged for prospective bidding firms to ascertain the exact nature of work required to be carried out.
- (viii) A technically responsive bidder is supposed to fulfill the qualitative and quantitative specifications of the material items and confirmation for provision of the entire services along with execution of the relevant terms and conditions.

## **Proposals**

The bidders are required to submit the Technical and Financial Proposals for the project in separate sealed envelopes under single stage two envelope bidding procedure.

## **Technical Proposal**

In Technical Proposal the Bidder should submit

- A document detailing all the offered hardware items along with necessary block & schematic diagrams of the Hardware System.
- Make & Model of the Equipment.
- Detailed specifications.
- Printed material & Brochures.
- A brief company profile with Five (05) years of relevant experience.

- Time line for rectification of Hardware problems.
- At least five references of similar projects completed by the firm.
- CVs of their Technical Experts.

### **Financial Proposal**

Financial proposal should consist of the prices of Hardware items which should be quoted in the format provided in Schedule of Requirements (Annex-V). The prices shall be inclusive of all taxes.

### **Documents establishing conformity to TOR**

The Bidder shall furnish, as a part of its bid, the following documents establishing conformity to the TOR of all services and works, which is proposed to provide under the contract.

### **Statement of Compliance**

- The Bidder shall submit a clause-by-clause statement of compliance in the specified format with respect to all sections of this TOR.
- The Bidder's comments in the statement of compliance will correspond to the clause/sub clause to which they relate and will clearly and concisely state the bidder's position thereto. Words such as "noted" shall not be adequate and shall be treated as "not complied".
- The Bidder shall provide, to the satisfaction of OGDCL, documentary evidence showing it's technical, financial, maintenance and Service support capability to execute the contract, if its bid is accepted.
- The bidder shall provide quotation of Hardware items and parts mentioned in the Annex-V

### **Maintenance and Service Support**

- The selected firm will provide Maintenance & Service support (covering parts and labor both free of cost) during the warranty period for (03) years.

- The firm will be required to execute a Service level Agreement (SLA) with OGDCL to this effect. This will be binding for the firm to rectify the fault with in specified period of time.
- Round the clock reporting and response for any faults and rectification within maximum of Seventy two (72) hours.
- Maintaining necessary inventory of Hardware parts for repair and maintenance of defective hardware items.

### **Post Installation Services.**

- A technically responsive bidder is supposed to fulfill the qualitative and quantitative specifications of the material items and confirmation for provision of the entire services along with execution of the relevant terms and conditions.
- A series of Acceptance Tests shall be conducted jointly by the Contractor and OGDCL to demonstrate the compliance and the proper functioning of the Hardware, and the system in accordance with the Contract. The experts deputed by the contractor will test the proper performance of all Hardware components and smooth running and further assist the company professionals for conducting acceptance test. The contractor will hand over full functional and operational system to OGDCL at Islamabad after successful completion of acceptance tests by the company officials. Other details are provided in the attached Hardware, Terms & Conditions at Annexes I to IV.
- Deployment of the Hardware items and installation as follows:
  - Layout of cables and connections with existing Hardware.
  - Installation of new Hardware items along with complete networking.
  - Testing for various components of Hardware for smooth operations by OGDCL officials in collaboration with contractor's expert
- Final acceptance test of the complete Hardware and networking by OGDCL Hardware Engineers along with system support professionals in collaboration with contractor's expert for certifying the authenticity of proper working of all the newly supplied Hardware.

Warranty support (Labour and parts both) shall be provided for supplied Hardware for a period of three (03) years from the date, the SDP center is taken over by OGDCL officials from contractor's experts, These services will be provided to OGDCL from a local facility (Islamabad based) on a complete package basis available round the clock (24X7) and in compliance with other post-installation Service and Support (Annex-IV)

## Annex-I

### Terms & Conditions – Hardware (New)

To be filled in by the Bidder

Sr#	OGDCL Requirements	Bidder Response	Compliance/ non-compliance	Remarks
1.	All new hardware components should match the detailed specifications as mentioned in annex-V and must be certified to run with Seismic Data Processing System at the time of installation. In case indented/offered components become unavailable, then those must be replaced with latest technology, improved performance and specifications.			
2.	An OEM certificate of new Hardware should be provided by the Bidder which may be validated by the original manufacturer. OGDCL reserves its right to reconfirm all the supporting documents provided by the Bidder.			
3.	The new Hardware items should be delivered at I-9 Base Stores, Islamabad within 120 days after the award of contract.			
4.	Detailed project schedule should be provided by the bidder, showing time required in number of calendar days for completing major phases of the work.			
5.	Acceptance test of System Hardware shall be carried out after installation at OGDCL Seismic Data Processing Centre in Islamabad as per Company's requirements.			
6.	Surety for the availability of related spares/ parts for five (05) years from the contract placing date.			

## Annex-II

### Terms & Conditions- Bidders General Information

To be filled in by the Bidder

Sr#	OGDCL Requirements	Bidder Response	Compliance/ non-compliance	Remarks
1.	At least five (05) years' experience of installation / commissioning and configuration of complete Seismic Data Processing System / advanced Hardware through their own experts.			
2.	Minimum five (05) years' experience of Seismic Data Processing System Hardware services, to National Oil companies, Multinational Oil companies and Seismic Data Processing centers.			
3.	Clientele list of at least five (05) Internationally reputed E&P Companies with global presence.			
4.	Must have an established local office in Islamabad for the provision of Technical Services and Support. May establish office after awarding of contract.			

## Annex-III

To be filled in by the Bidder

### Terms & Conditions – Expert Services

Sr#	OGDCL Requirements	Bidder Response	Compliance/ non-compliance	Remarks
1.	The Experts of the contractor shall be responsible for installation and commissioning of supplied Hardware items and configuration with existing Data Processing system in OGDCL Islamabad.			
2.	The Hardware installation will include networking and configuration with the existing Seismic Data Processing System.			
3.	The Experts of the contractor shall be responsible for start-up and smooth operations of the complete Seismic Data Processing System and shall supervise and guide the relevant professionals of OGDCL during this period.			
4.	Acceptance test of System Hardware along with all peripherals will be carried out after completion of installation and smooth operations at Seismic Data Processing Centre in Islamabad as per Company's requirement with the guidance and support of experts. Details of standard acceptance tests for Hardware will be provided by the contractor.			



## Annex-IV

### Terms & Conditions – Post Installation-Service & Support

To be filled in by the Bidder

Sr#	OGDCL Requirements	Bidder Response	Compliance/ non-compliance	Remarks
1.	Availability of Vendor's Support Portal for the queries and the rectification thereof.			
2.	These services shall be provided for supplied Hardware for a period of three (03) years from the date, the Seismic Data Processing center is taken over by OGDCL professionals from contractor's experts,			
3.	Facility for online help and guidance regarding technical issues of added Hardware items should remain available after installation.			
4.	Any new versions/ updates/ enhancements/ package(s) for the firmware of supplied Hardware items should be provided to the OGDCL, free of cost for three (03) years.			
5.	Hardware and Services Support should be available round the clock and fault should be rectified within Seventy two (72) Hours.			
6.	In case of unsatisfactory performance. The quarterly payment of the Supplier may be stopped or the bank Guarantee may be en-cashed in extreme case.			

## Schedule of Requirements:

**Annex-V**

**Material:** Additional H/W for the upgradation of disk storage capacity of SDPS

**Tender Enquiry No.** To be inserted by SCM Department

**Due Date:** (To be completed, filled in, signed and stamped by the principal)

To be filled in by the Bidder

Sr. #	Minimum Hardware Specification for the upgradation of Disk storage capacity of Seismic Data Processing System	Quoted units, Quantity & Prices in US\$			
		Unit	Required Qty	Unit Price (C&F)	Total Price (C&F) by air
1.	<b>File Server</b>	Nos.	5		
	Dell R740xd Disk server or Equivalent				
	<b>Processor:</b> 2x 4114 10 core Intel Xeon				
	<b>Memory:</b> 192GB , 12x16GB RDIMM, 2666 MHz, Dual Rank DDR4 2xM.2 120GB				
	<b>Disk controller:</b> Compatible				
	<b>Chassis:</b> Compatible				
	<b>Disk configuration:</b> 12x4 TB 7200 RPM HD RAID 5 HD size:3.5"				
	<b>Operating system:</b> CentOS 7.2 or Higher				
<b>Power Supply:</b> Redundant 220 Volt AC Power Supply 50Hz					
2.	<b>File Enclosure</b>	Nos.	10		
	Dell Power Vault MD 1400 or Equivalent				
	<b>Hard drive:</b> 12 x 4 TB 7200 RPM RAID 6 HD size:3.5" SAS 12Gb/s				
	<b>Disk controller:</b> Compatible				
	<b>Chassis:</b> MD 1400 Motherboard or Equivalent				
	<b>Disk configuration:</b> RAID 6				
<b>Operating system:</b> CentOS 6.5 or higher					
<b>Power Supply:</b> Redundant 220 Volt AC Power Supply 50Hz					
3.	<b>APC Rack Net Shelter:</b> SX 42U 600mm Wide x 1070mm Deep x 1991mm Height , without Sides - Black or Equivalent	Nos	1		
4.	<b>APC Air Containment Rear Assembly:</b> for Net Shelter SX 42U and In-Row 600mm or Equivalent	Nos	1		
5.	<b>APC Metered Rack:</b> PDU Zero U 2G -( rack-mountable ) AC 200/208/230 V - 42 Output Connector(s) - 0U or Equivalent	Nos	2		
6.	<b>KVM Switch:</b> Dell DAV2216-G01 16-port analog, biodegradable to digital KVM switch: 2 local users, 1 power supply or Equivalent	Nos	1		
7.	Dell DMPUIQ-VMCHS-G01 for VGA, USB keyboard, mouse supporting virtual media, CAC \$ USB2.0. or Equivalent.	Nos	16		
8.	<b>Dell LED:</b> 18.5in, KMM DKMMLED185-001 - International English Keyboard or Equivalent	Nos	1		
9.	<b>Dell Networking Cables,</b> SFP+ to SFP+, 10GbE, Copper Twinax Direct Attach Cable, 3 Meter or Equivalent	Nos	10		
10.	3m Straight Through Cat6 Ethernet Cable Assembly, S/FTP gray LSZH	Nos	5		
11.	3m Straight Through Cat6 Ethernet Cable Assembly, S/FTP Red LSZH	Nos	5		

FAQs: Up gradation of Disk Storage Capacity of OMEGA-II by 720 TB  
(Tender Enquiry no. PROC-FE/CB/EXPL/SDPC-4659A/2020)

**Question.1**

**File Server**

·Please mention the required server connectivity IO Module?

**File Enclosure:**

·Please mention the required connectivity IO Module?

·Please mention the connectivity PERC Card with direct attached server?

**Answer.**

For the type of PERC, Each Server contain the below RAID controller:

1. PERC H740P RAID Controller,  
8GB NV Cache, Adapter, Low Profile

2. PERC H840 RAID Adapter for  
External MD14XX Only, 8GB  
NV Cache, Full Height

H740 and H840 Adapters with 8GB shall be used.  
10 G copper connectivity with SAS cable is required.  
Use Unified mode (recommended redundant path).

**Question.2**

**KVM Switch:**

·Do you required 16 Port Analog switch OR Digital switch?

**Answer.**

Our minimum hardware requirement is 16 Port Analog switch as per the S.O.R provided.

**Note.**

1. Connection of the Disk servers will be 10 G, connected with the CISCO NEXUS 93180YC-FX SWITCHES L3 48 X 1/10/25 GIGABIT SFP++ 6X 40/100 GIGABIT QSFP+
2. As per "Scope of work" clause (vii) of the TOR. A visit to the site may be arranged for prospective bidding firms/ vendors to ascertain the exact nature of work required to be carried out.

# Overview of complete Configuration of Existing Data Processing System.

## System Configuration

### Summary:

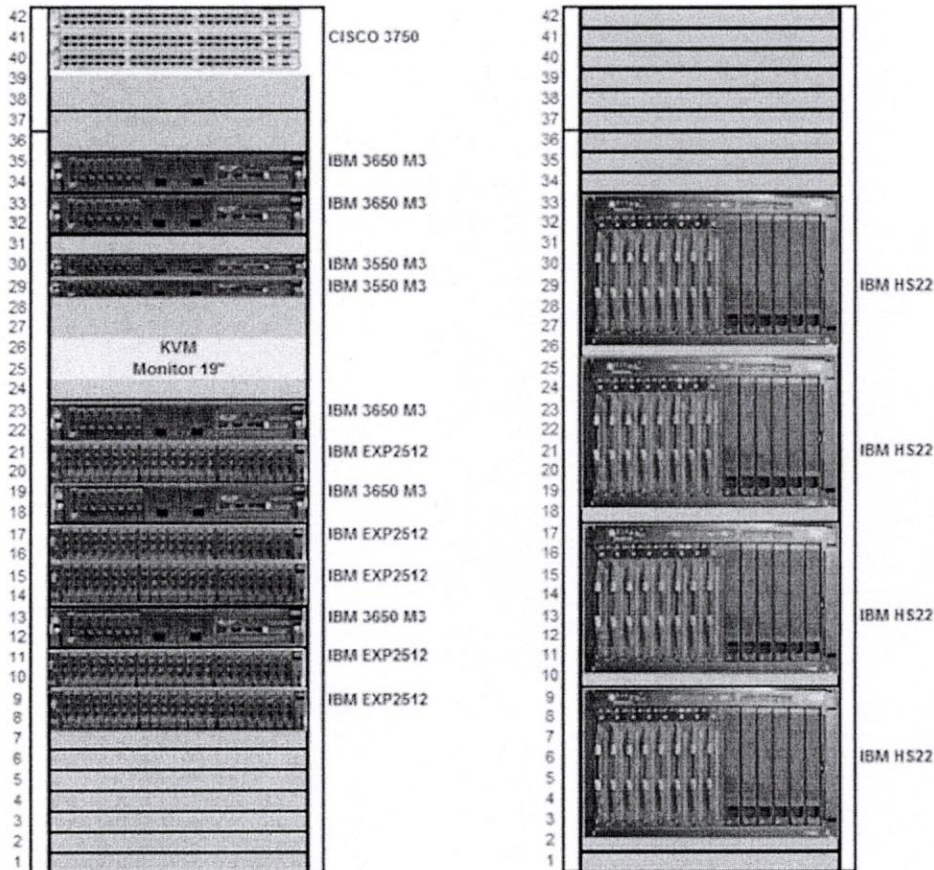
WesternGeco had provided OGDCL with (672 Cores) system in June 2012

Total Numbers of Cores **672**

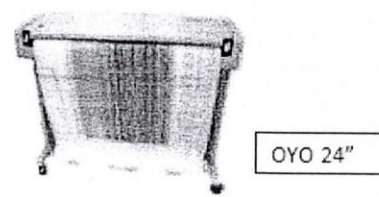
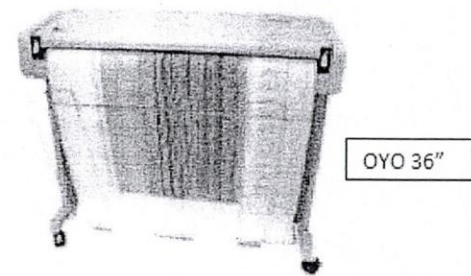
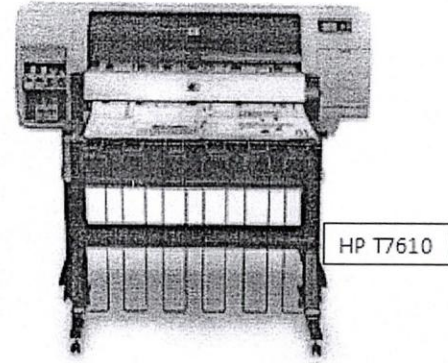
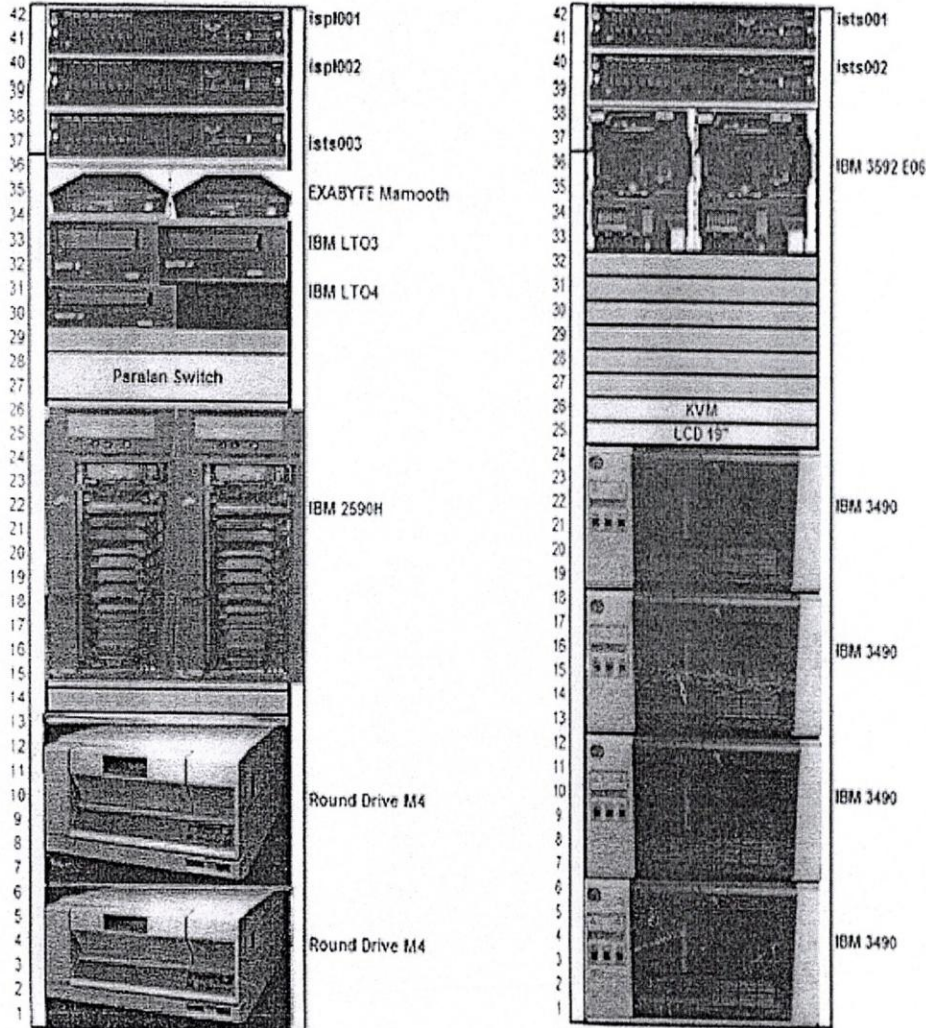
Omega Baseline **2018.1EXT**

Oracle Version installed **12.1**

### OGDCL Computer Area1



# OGDCL Computer Area 2



### Configuration Details:

Data Processing System Configurations in the below Snap

Qty/Index	Service Tag / Serial Number	Vendor	Type	Model
56	HS22 switched E Chassis	IBM	8677	PFC
2	HS22 switched E Chassis	IBM	8677	PFC
2	X3550 M3 RACK SERVER	IBM	7944	PNH
5	X3650 M3 RACK SERVER(Disk server RES009A)	IBM	7945	PSN
5	X3650 M3 RACK SERVER(Tape Server TS012)	IBM	7945	PSP
5	EXP2512 12 DRIVE DISK TRAY (RDS010-1)	IBM	1747	HC1
2	IU 19" FLAT PANEL DISPLAY STATION IBM IU 19"	IBM	1723	19X
2	KVM Switch	IBM	1754	D1X
2	JAGUAR TAPE DRIVE	IBM	3592	E06
3	CISCO Switch 48 Ports	CISCO	48	3750
2	3590-H11	IBM	3590	H11
2	Round	M4	9-track	M4
4	3490E-F11	IBM	3490	F11
2	EXA - MAMOUTH	EXABYTE	8mm	Mamouth
2	LTO4	IBM	LTO	LTO4
1	LTO3	IBM	LTO	LTO3
1	Plotter	OYO	Thermal	624
1	Plotter	OYO	Thermal	636
1	Plotter Design Jet	HP	CQ106A	T7100
24	Workstations	DELL	Precision	T7500
48	LCD 30"	DELL	30"	3100

