

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 SDPS HARDWARE
Tender Enquiry No PROC-FE/CB/EXPL/SDPC-4331/2019
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	Compute Nodes	Number	21					
2	Database Server	Number	1					
3	Application Server	Number	1					
4	Migration Server	Number	1					
5	Engineering Workstations	Number	8					
6	LCD's	Number	16					
7	Network Switches	Number	2					
8	Power Modules for UPS	Number	4					

Note: Detailed Specifications attached at Annexure V.

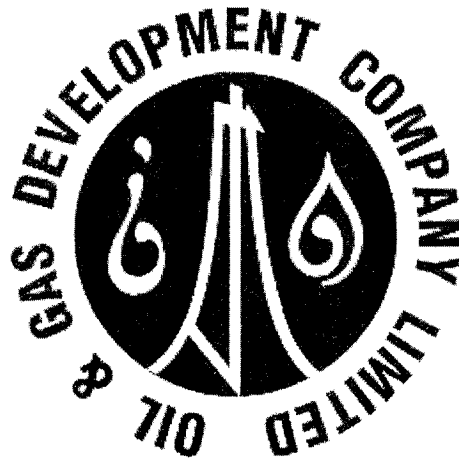
1. **Bid bond:** - Pursuant to tender clause # 2.2, 11.4, 13 & 35.3.2, bid bond amounting USD 10,000/- (United States Dollar Ten Thousand only) or equivalent in Pak Rupees should be submitted with the technical bid.
2. **Foreign Procurement Payment Terms (also available at OGDCL website (Tenders Tab))**
Tender value less than or equal to US\$ 200,000:
 Payment to the Contractor/ bidder in foreign currency shall be made by establishing in favor of the Contractor an irrevocable Letter of Credit (hereinafter called the L/C). 70 % Payment (s) under the L/C will be made for the FOB/ CFR / CPT (as the case may be) price of material of each shipment upon submission of the shipping documents. Balance 30% Payment will be released after receipt, inspection and acceptance of material.
Tender value more than US\$ 200,000:
 Payment to the Contractor/ bidder in foreign currency shall be made by establishing in favor of the Contractor an irrevocable Letter of Credit (hereinafter called the L/C). 80 % Payment (s) under the L/C will be made for the FOB/ CFR / CPT (as the case may be) price of material of each shipment upon submission of the shipping documents. Balance 20% Payment will be released after receipt, inspection (in addition of pre-shipment inspection) and acceptance of material.
3. **Evaluation Criteria:** - FULL CONSIGNMENT WISE ON C&F (BY AIR) ISLAMABAD BASIS. Bidder to quote the cost of "Training" separately, which will not be part of Financial Evaluation.
4. **Shipment from ACU member Countries:-** In case of shipment from ACU member countries, the LC beneficiary should be of that particular country from where the consignment is being shipped.
5. **Terms and conditions:-** Bidders are advised to carefully read all the terms and conditions of the Tender Document available at OGDCL website in the master tender document and attached technical Terms & Conditions.
6. **Delivery Period:** 120 days

Vetted

Rashid
 27-3-2019
RASHID JAMIL CHAUHAN
 Acting Manager (SS&HW),
 SDPC, Exploration Deptt.
 OGDCL, Islamabad
 Ext: 3259

TERMS OF REFERENCE (TOR)

FOR THE UPGRADATION OF HARDWARE OF EXISTING SDP SYSTEM



SYSTEM SERVICES GROUP SEISMIC DATA PROCESSING CENTRE EXPLORATION DEPARTMENT

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Objective

OGDCL intends to enhance its Seismic Data Processing potentiality by upgrading the computational capacity of Hardware of its existing Data Processing System. Detailed Specification of the required 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 H/W along with required services support and parts as a Complete Package on Turnkey basis.
- ii. Configuration of the new H/W with existing Seismic Data Processing system setup. (Existing H/W detail is attached at page 12). This will include
 - a) Replacement of old Compute Nodes with new nodes & OCI Migration Master Server.
 - b) Replacement of Oracle and Job Servers with new Servers.
 - c) Replacement of old Networking switches with new ones.
 - d) Configuration of new Work Stations with upgraded Data Processing System.
- iii. Installation/Commissioning of H/W with standard acceptance tests.
- iv. Smooth operation for Eight (08) weeks through qualified local/Foreign Experts.
- v. Warranty Support (Services and replacement of parts both) for three (03) years.

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's experts and OGDCL professionals to demonstrate the compliance and the proper functioning of the Hardware, and the System in accordance with the awarded Contract. The experts deputed by the contractor will test the proper performance of all H/W components and smooth running and further assist the OGDCL professionals for conducting acceptance test. The contractor will hand over full functional and operational systems in the premises provided by OGDCL at Islamabad after successful completion of acceptance tests by the company professionals. Other details are provided in the attached Hardware, Terms & Conditions at Annexes I to IV.

Deployment of new H/W equipment and installation are as follows:

- Layout of cables and connections with existing HW of SDP System.
- Installation of new H/W along with complete networking, cabling, piping etc.

as mentioned in the Fig (i) and additional power and data points.

- Testing for added H/W components for smooth operations of the complete HW system for Eight (08) weeks by OGDCL professionals in collaboration with contractor's expert
- Final acceptance test of the complete H/W and networking by OGDCL professionals in collaboration with contractor's expert for certifying the authenticity of efficient working of all the newly supplied H/W.

Maintenance and Service Warranty Support

The selected contractor shall provide Maintenance & Service support for all the awarded items/HW for a warranty period of three (03) years. This will include

- Corrective visit shall be made on call basis whenever required. This will include labor and replacement of parts free of cost.
- Four (04) preventive visits shall be made in a year. This will include service and performance tests of the unit as per manufacturer recommendations
- Round the clock reporting and response for any faults and rectification within maximum of Seventy Two (72) hours
- Maintaining necessary inventory of H/W parts for repair and maintenance of defective hardware components.

Proposals

The contractors are required to submit the Technical and Financial Proposal 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 H/W system should also be attached.
- Make & Model of the Equipment.
- Detailed specifications.
- Printed material & Brochures.
- A brief company profile with years of relevant experience.
- Time line for rectification of H/W problem.
- At least five references of similar projects completed by the firm.
- CVs of the experts.

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Financial Proposal

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

Final Appraisal

The information supplied by the Bidders of their submitted Technical Proposals shall be evaluated by the Technical Evaluation Committee. It shall be validated that Technical Proposal contains relevant information and the quoted supplies fulfill all the technical requirements as available in the relevant Annexes of Hardware, Services and Terms & Conditions. The comprehensive evaluation shall proceed, weighing the supplied information against different categories as mentioned in the attached Annexes, by the Technical Evaluation Committee as per acceptance/ rejection criteria.

Documents establishing conformity to TOR

The Bidder will furnish, as 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.
- Provision of two (02) weeks professional training program for two (02) Hardware Professionals conducted abroad should be quoted separately. The training shall be inclusive of air ticket, boarding and lodging.

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Terms & Conditions – Hardware (New)

To be filled in by the Bidder

Sr#	OGDCL Requirements	Bidder Response	Compliance/ non-compliance	Remarks
1.	All the new hardware components should match the detailed specifications as mentioned vide Annex-V and must be certified to run Seismic Data Processing System (SDPS) 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 all new hardware should be provided by Bidder that may be validated by the original manufacturer. OGDCL reserves its right to reconfirm all the supporting documents provided by the Bidder.			
3.	The complete HW system should be delivered at I-9 Base Stores, Islamabad within 120 days after award of the contract.			
4.	Detailed project schedule should be provided showing time required in number of calendar days for completing major phases of the work. Installation should be started soon after receiving of consignment.			
5.	Acceptance test of System Hardware shall be carried out after installation at OGDCL Seismic Data Processing Centre in Islamabad as per Company requirement. Details of standard acceptance tests for H/W will be provided by the contractor.			
6.	Surety for the availability of related spares/parts of new HW for five (05) years from the contract placing date.			
7.	Provision of verifiable OEM certificate showing the life-cycle of the quoted H/W. It should have more than five years life.			

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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 large scale H/W Cluster through their own experts.			
2.	Minimum five (05) years experience of handling Hardware and related services of large scale Cluster System.			
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 contract.			

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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 H/W and configuration for the large scale cluster system to be installed at the premises provided by OGDCL in Islamabad.			
2.	The system installation will include networking and layout of communications with the existing Seismic Data Processing System (SDPS)			
3.	The Experts of the contractor shall be responsible for start-up and smooth operations of the complete H/W to be installed and shall supervise/guide the relevant professionals of OGDCL during this period.			
4.	Acceptance test of System Hardware along with all peripherals shall be carried out after completion of installation and Eight (08) weeks smooth operations at Seismic Data Processing Centre in Islamabad as per Company requirement with the guidance and support of experts. Details of standard acceptance tests for HW shall be provided by the contractor.			

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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 HW (Services and replacement of parts both) 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.	A new Support & Services agreement may be signed after the warranty period for a further period of two (02) years with mutual consents.			
4.	Any new versions/updates/enhancements/package(s) for the firmware should be provided to the Company, free of cost for three (03) years.			
5.	Hardware and Support Services 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.			

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Schedule of Requirements:

Annex-V

Material: Additional H/W for the upgradation of SDPS
Tender Enquiry No. To be inserted by SCM Department

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

Sr. #	Minimum Hardware Specification for additional Hardware for the upgradation of SDP System	Quoted units, Quantity & Prices in US\$			
		Unit	Required Qty	Unit Price (C&F)	Total Price (C&F) by air
1.	Compute Nodes: Total 672 cores Dell Power Edge Power Edge C6420 or Equivalent Processor: 2x Intel Xeon Gold 6130 2.1G, 16C/32T, 10.4GT/s, 22M Cache, Turbo, HT (125W) DDR4-2666 (32 cores each node) Memory: 192GB, 12x16GB RDIMM, 2666MT/s, Dual Rank Disk controller: C9B, PERC H330 Controller, C6420 1U Direct BP, RAID 0, Supports up to 6x2.5in Hard Drives Chassis: Compatible Disk configuration: 800GBx4 SSD SATA Mix Use 6Gbps 512n 2.5in Hot-plug Drive, Hawk-M4E, 3 DWPD, 4380 Operating system: Latest version of CentOS	Nos.	21		
2.	Oracle Server (Data Base Server) Dell Power Edge R640 -2x 4114 10Core-192GB, 2 M.2 Sticks 120G, 4x1.92TB 10K HD Raid 5 or Equivalent Processor: 2 x Intel Xeon Silver 4114 2.2G, 10C/20T, 9.6GT/s, 14M Cache, Turbo, HT (85W) DDR4-2400 Memory: 12 x 16GB RDIMM, 2133 MT/s, Dual Rank, x4 Data Width (370-ABUG) Hard drive: 4x 1.92TB SSD SATA Mix Use 6Gbps 512e 2.5in Hot-plug Drive, S4600, 3 DWPD, 10512 TBW Disk controller: PERC H740P RAID Controller, 8GB NV Cache, Mini card Chassis: Compatible. Disk configuration: RAID 1+RAID 5 Operating system: Latest version of CentOS Power Supply: Redundant 220 Volt AC Power Supply 50Hz	Nos.	1		
3.	OCM Server (Omega Cluster Manager) Dell Power Edge R640 or Equivalent-2x 4114 10Core-192GB, 2 M.2 Sticks 120G, 4x1.92TB 10K HD Raid 5 Processor: 2x Intel Xeon Gold 6130 2.1G, 16C/32T, 10.4GT/s, 22M Cache, Turbo, HT (125W) DDR4-2666	Nos.	1		

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	Memory: 192GB , 12x16GB RDIMM, 2666MT/s, Dual Rank Hard drive: 4x 1.92TB SSD SATA Mix Use 6Gbps 512e 2.5in Hot-plug Drive, S4600,3 DWPD,10512 TBW Disk controller: PERC H740P RAID Controller, 8GB NV Cache, Mini card Chassis: Compatible Disk configuration: RAID 1+RAID 5 Operating system: Latest version of CentOS Power Supply: Redundant 220 Volt AC Power Supply 50Hz				
4.	OCI Server (Migration Master) Dell Power Edge R640 or Equivalent- 2x6130 16 core,192GB of RAM, 2xM.2 120GB,6x1.2TB 10K HD Raid 5 Processor: 2 x Intel Xeon Gold 6130 2.1G, 16C/32T, 10.4GT/s , 22M Cache, Turbo, HT (125W) DDR4-2666 Memory: 12 x 16GB RDIMM, 2666MT/s, Dual Rank Hard drive: 6 x 1.2TB 10K RPM SAS 12Gbps 512n 2.5in Hot-plug Hard Drive Disk controller: PERC H740P RAID Controller, 8GB NV Cache, Mini card Chassis: Compatible Disk configuration: RAID 1+RAID 5 Operating system: Latest version of CentOS Power Supply: Redundant 220 Volt AC Power Supply 50Hz	Nos.	1		
5.	Workstation DELL-7920 , 2x5122 4 core, 192GB of RAM, 1 M.2 Sticks PCIe 512 Gig, 5x2TB 7.2K HD or Equivalent Processor: 2 x Intel Xeon Gold 5122 3.6GHz,3.7GHz Turbo,4C,10.4GT/s 2UPI, 16.5M Cache,HT (105W) DDR4-2666 Memory: 192GB (12x16GB) 2666MHz DDR4 RDIMM ECC BD-RE Drive : 8 x Half-Height Hard Drive: 1 M.2 Sticks PCIe 512 Gig, 5x2TB 7.2K HD Disk Controller: Mega RAID SAS 9440-8i 12Gb/s PCIe SATA/SAS controller - SW RAID 0, 1,5,10 Video Configuration: NVIDIA Quadro P4000, 8GB, 4 DP (7X20T) Operating System: Latest version of CentOS Complete Ethernet & Power Cabling. From UPS DB to attached layout.	Nos.	8		
6.	LCD Dell 30" Ultra sharp U3017FP Flat Panel Monitor with Premier Color or Equivalent	Nos.	16		
7.	Network CISCO Catalyst 3850X 48 Port Data IP Base or Equivalent	Nos.	2		
8.	Power Module for APC Symmetra PX 10/16 KW 400V p/n SYPM 10K16H	Nos.	4		

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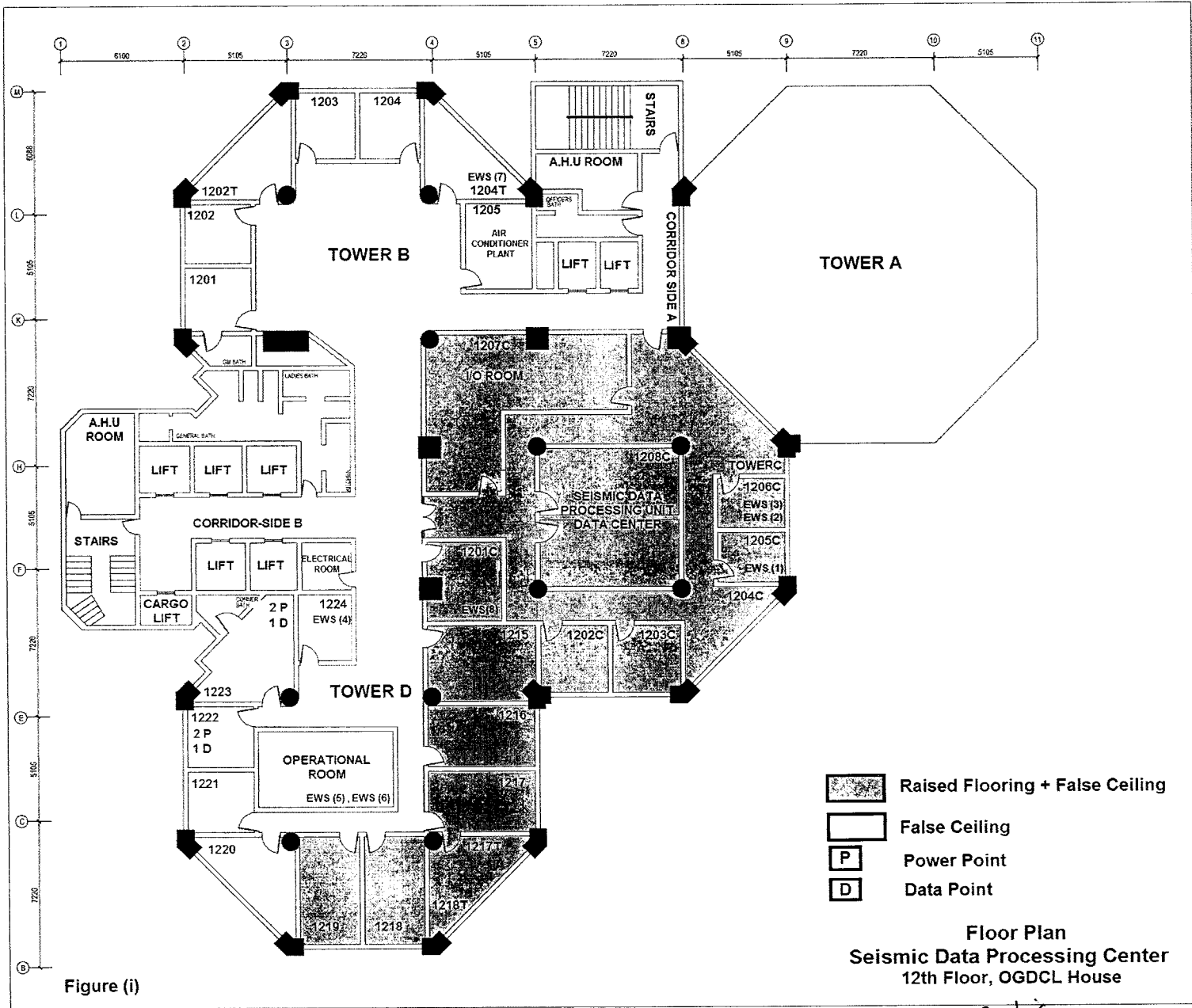


Figure (i)

Floor Plan
Seismic Data Processing Center
12th Floor, OGDCL House

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Overview of complete Configuration of Existing Data Processing System.

System Configuration

Summary:

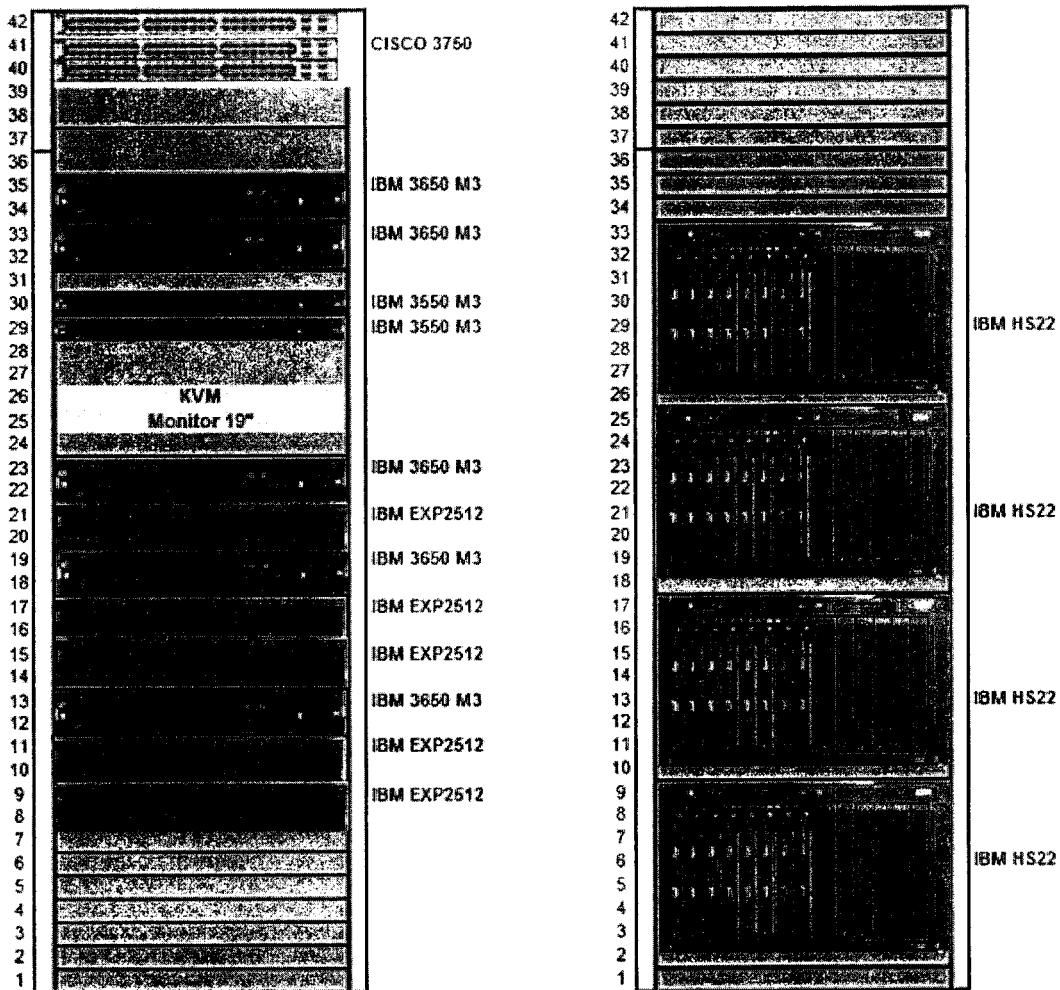
WesternGeco had provided OGDCL with (672 Cores) system in June 2013

Total Numbers of Cores **672**

Omega Baseline **[REDACTED]**

Oracle Version installed **[REDACTED]**

OGDCL Computer Area1

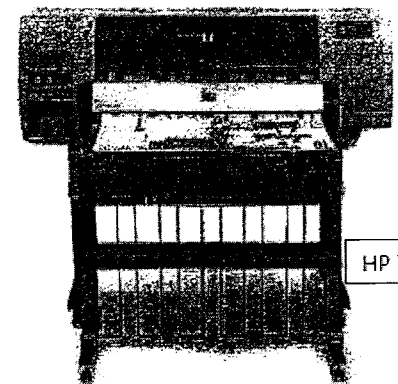
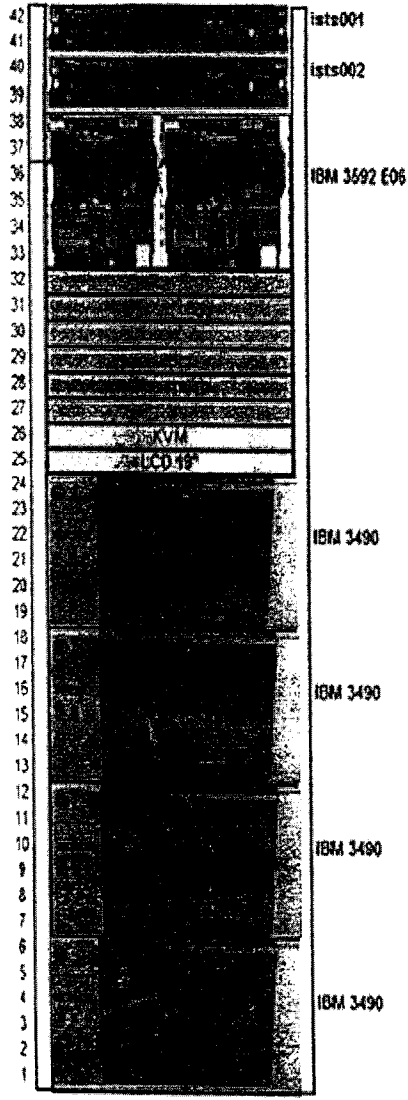
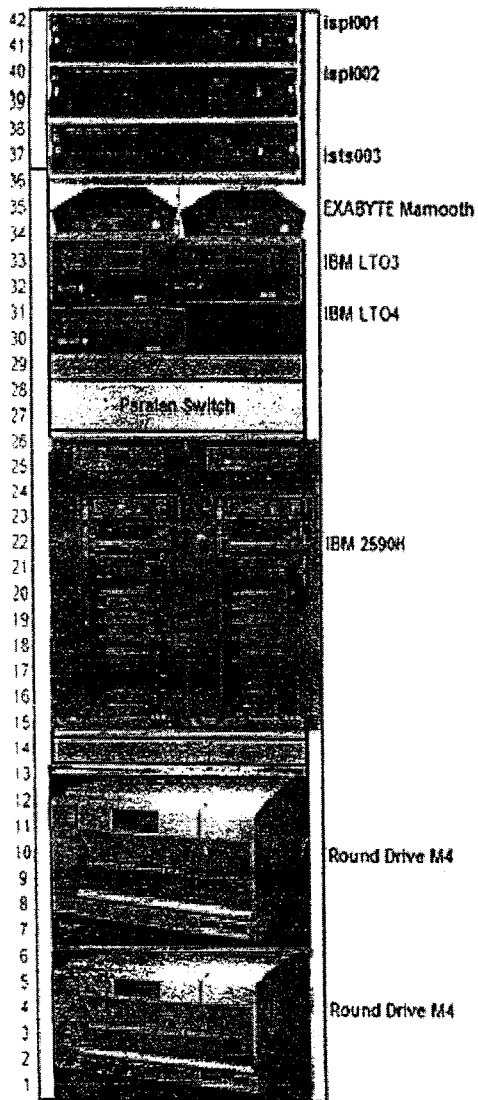


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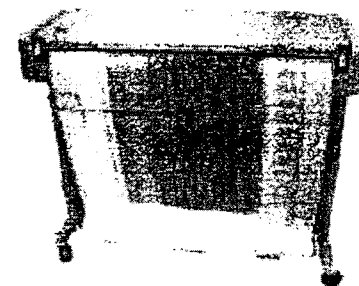
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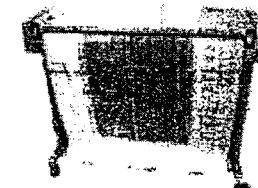
OGDCL Computer Area 2



HP T7610



OYO 36"



OYO 24"

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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