

## 1. COMPANY FACILITY

**CB GEOPHYSICAL SOLUTIONS LIMITED** Seismic Center and admin offices are all located in Plot 202 Bank- Anthony Avenue, off ordinance road, Trans Amadi industrial Layout, Port Harcourt. Seismic Processing and Interpretation/Studies equipments are owned by CB Geophysical Solutions Ltd.



## 2. EQUIPMENT - HARDWARE

### **2.1 PROCESSING HARDWARE**

#### **Equipment – owned 100% Nigerian**

- 12 GPU Clusters for Seismic Processing
- CPU Workstations x 6pcs
- CPU process serves
  - 6 core dual-CPU / node
  - CPU frequency 2.66GHz Memory 24GB
  - Hard disk 10TB
  - Number of CPU process server:
- GPU nodes (12)

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  - 8 computing GPU nodes
  - GPU frequency 2.66GHz
  - Memory 24GB
  - Hard disk 5TB

- GPU type 12 pcs of Kepler K10 system Video memory 1.5GB×2
- Number of GPU nodes 12
- Published floating point performance: 4TFLOPS x12x8 = 384 TFLOPS
- Network
  - Switched GB 1GB/S
  - Switched IFB: 40 GB/S
- Monitor
  - KVM switch 12-port
  - GPU host server
  - GPU storage server
  - HP Plotter 44” x 150”
  - NCI Seismic Processing Software
  - 2 x 200 Kva Perkins Soundproof Generators
  - 1 x 500 kva dedicated ABB Copper Transformer
  - Split Unit and Standing A/cs – 31 pcs
  - Diesel Storage – 5000 L

## 2.1.2 Capacity and Capacity Development

### EQUIPMENT CAPACITY.

THE CENTER HAS CAPACITY FOR SEISMIC ACQUISITION, SEISMIC PROCESSING (PSTM, PSDM, RTM) (LAND, MARINE AND OBC)(2D, 3D AND 4D), SEISMIC INTERPRETATION, SEISMIC ACQUISITION QA/QC, SEISMIC TAPE / DATA STORAGE SERVICES.

OUR PROCESSING CAN HANDLE 8000 KM2 IN PARALLEL

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### CB Geophysical Solutions Ltd

Plot 202 Bank-Anthony Avenue, Off Ordinance Road, Trans-Amadi Industrial Layout, P.M.B 168, Port-Harcourt, Rivers State, Nigeria. Tel: **0803-339-1354**

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## HARDWARE SPECIFICATION

<b>S/N</b>	<b>Description of Hardware</b>	<b>Sub description</b>
1	<p><b>GPU cluster (Graphics Processing Units)</b>  <b>Kepler K10 (GPU Nodes)</b>            Chassis 2U/GPU Intel Platform            Processor Intel Xeon 8x2.3GHz LGA1366 Six-Core Processor            Memory 32x 8GB DDR3 1333MHz ECC Registered w/ Parity memory module            Hard Drive 2.5" 1TB SATA 6.0Gb/s Enterprise Hard Drive            Hard Drive 2.5" 500GB SAS 6.0Gb/s Enterprise Hard Drive            GPU NVIDIA Tesla Kepler 10</p>	<p>288 GPUs clustered in 3x19inch racks, 8GPUs per compute node and scalable with no upper limit within the cluster</p>
2	<p><b>Combined Capacity of GPU cluster</b></p>	<p>360,000 Teraflops</p>
3	<p><b>Storage Capacity (NAS) configured to RAID 6 System (Storage Node)</b>            Chassis 4U Rackmount chassis 900W Redundant Power Supply            Processor Intel Xeon 4x 2.93GHz LGA1366 Six-Core Processor            Memory 8x 8GB DDR3 1333MHz ECC Registered w/ Parity memory module            Hard Drive 3.5" 32x 2TB SATA 6.0Gb/s Enterprise Hard Drive            RAID Controller SAS/SATA PCI-E 2.0 x8 RAID Controller Card</p>	<p>76 terabytes total with 65 terabytes effective, scalable with no upper limit within the cluster</p>

	Read Write between nodes and storage	Parallel read/write, all nodes
4	Network Communication between nodes for low latency parallel computing	40 Gigabits/sec and scalable up to 120gigabits/sec
5	Network communication with user terminals	1 gigabit/sec
6	Backup media	3592 tape drive
7	Data Processing capacity	80,000 km2 in parallel

### 2.1.3 SOFTWARE SPECIFICATION

S/N	Software name
1	Geoeast
2	Promax
3	NCI
4	Paradym
5	GMT (Green Mountain)
6	Eclipse
7	Petrel

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