

# MAJOR ITEMS OF PLANT AND EQUIPMENT

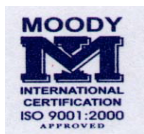


**IVCC**  
ENGINEERING (PVT) LTD.

## POSTAL ADDRESS

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Lahore - 54660, Pakistan

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# CONTENTS

<b>Ser No.</b>	<b>Items</b>	<b>Page</b>
1.	Crawler Cranes.	3
2.	Mobile Cranes.	4
3.	Specialised Piling and Testing Equipment.	5-8
4.	Concreting Equipment.	9-11
5.	Reverse Circulation Drilling Equipment.	12
6.	Straight Rotary Drilling Equipment.	13
7.	Diamond Core Drilling Equipment.	14-17
8.	Crawler Drilling Equipment.	18-19
9.	Down The Hole Hammers and ODEX Drilling Equipment.	20
10.	Tunnelling Equipment.	21-23
11.	Pneumatic/Hydraulic Light Hand Drills/Breakers/Hammers.	24
12.	Demolition Equipment.	25
13.	Excavation Equipment.	26
14.	Percussion/Cable Tool Drilling Equipment.	27
15.	Grouting Equipment.	28
16.	Gunite/Shotcrete Equipment.	29
17.	Dewatering Equipment.	30
18.	Air Compressors.	31-32
19.	Generating Sets.	33-34
20.	Welding Generators.	35
21.	General & Multipurpose Pumps.	36-37
22.	Deepwell Turbine/Submersible Pumps.	38
23.	Well Development and Testing Units.	39
24.	Geotechnical Investigation Accessories/Instruments.	40-41
25.	Offshore Drilling Support Equipment.	42
26.	Under Water Cutting Equipment.	43
27.	Miscellaneous Equipment and Stores	44

## CRAWLER CRANES

Item No.	Description	Nos. Held
1.	<b>Crawler Crane AJAX C60:</b> Make: NCK-Rapier Ltd., U.K. Max lifting capacity: 65 Tons Max combined boom: 110 feet Prime Mover: GM 6-71	2
2.	<b>Crawler Crane Andes C-41 B:</b> Make: Ransom & Rapier p.I.c. Max lifting capacity: 40 Ton. Max combined boom: 80 Feet. Prime Mover: GM 4-71	1
3.	<b>Crawler Crane P &amp; H 655:</b> Make: P & H. Max lifting capacity: 35 Ton. Max combined boom: 75 Feet. Prime Mover: GM 6-71	1
4.	<b>Crawler Crane Hitachi KH-100</b> Make: Hitachi, Japan Model: KH-100 Max lifting capacity: 30 Ton. Max combined boom: 75 Feet. Prime Mover: Hino Diesel Engine 6 Cylinder.	1
5.	<b>Crawler Crane P &amp; H 355:</b> Make: P & H. Max lifting capacity: 20 Ton. Max combined boom: 100 Feet. Prime Mover: Mitsubishi 6 Cylinder.	1
6.	<b>Crawler Crane 22 - RB:</b> Make: Ruston - Bucyrus. Max lifting capacity: 15 Ton. Max combined boom: 100 Feet. Prime Mover: GM 4-71	1
7.	<b>Crawler Crane AJAX C75A:</b> Make: NCK Ltd., U.K. Max lifting capacity: 75 Ton Max combined boom: 110 Feet Prime Mover: GM 6-71	1

## MOBILE CRANES

Item No.	Description	Nos. Held
1.	<b>Mobile Crane Grove RT 65S</b>	1
	Make: Grove	
	Serial No. 38328	
	Model: RT 65S	
	Max lifting capacity: 30 Tons	
	Max combined boom: 80 feet	
	Prime Mover: CAT V-8 (3208)	
2.	<b>Mobile Crane Bantam Model T-350</b>	1
	Make: Bantam - U.K.	
	Max lifting capacity: 10 Tons	
	Max combined boom: 46 feet	
	Prime Mover: G.M. 4-53	
	Crane Hoisting Prime Mover: G.M. 3-53	

## SPECIALISED PILING AND TESTING EQUIPMENT

Item No.	Description	Nos. Held
1.	<b>BAUER Rotary Drilling Rig - BG 25 C</b>	1
	Make: BAUER Maschinen GmbH	
	Overall height: 22.6 M	
	Torque: 245 kNm	
	Main Winch: 200 kN	
	Crowd Force - Winch: 260/260 kN	
	Crowd Stroke - Winch: 6.7 M	
	Drilling Diameter: 1.700 / 1.900 MM	
	Drilling Depth: 57 M	
	Crawler Length: 5.4 M	
	Operating Weight: 72 Ton	
	Engine Power: 205 kW	
	Base Carrier: BH 60	
	<b><u>Drilling Processes with Standard Equipment :</u></b>	
	Kelly drilling (without casing oscillator).	
	CFA drilling (pre-equipped with hydraulic and electric installations).	
	FDP Full-Displacement-Piling (pre-equipped with hydraulic and electric installations).	
2.	<b>BAUER Rotary Drilling Rig - BG 18 H</b>	1
	Make: BAUER Maschinen GmbH	
	Overall height: 19.1 M	
	Torque: 176 kNm	
	Main Winch: 140 kN	
	Crowd Force - Winch: 200/200 kN	
	Crowd Stroke: 13.6 M	
	Drilling Diameter: 1.500 MM	
	Drilling Depth: 45 M	
	Crawler Length: 4.8 M	
	Operating Weight: 53 Ton	
	Engine Power: 186 kW	
	Base Carrier: BT 50	
	<b><u>Drilling Processes with Standard Equipment :</u></b>	
	Kelly drilling (without casing oscillator).	
	CFA drilling (pre-equipped with hydraulic and electric installations).	
	FDP Full-Displacement-Piling (pre-equipped with hydraulic and electric installations).	

<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>
<b>LARGE DIAMETER CRANE MOUNTED DIGGERS:</b>		
3.	<b>Hughes Micon 100/130 KCA:</b> Make: Hughes Micon Tool Co. U.S.A. Model: 100/130 KCA Kelly: 55 Meters, Triple Telescopic Max. Torque: 130,000 ft.lb Max.Drill Dia: 3 Meters Prime Mover: GM V-6-71	2
4.	<b>Soilmec RT 3-S</b> Make: Soilmec S.p.A, Italy. Model: RT 3-S Kelly: 55 Meters, Quadruple Telescopic Max. Torque: 152,000 ft.lb Max Power: 160 HP Max.Drill Dia: 3 Meters RPM: 130 Prime Mover: Fiat 6 Cylinder	1
5.	<b>Casagrande C-50</b> Make: Casagrande S.p.A, Italy. Model: C-50 Kelly: 44 Meters, Triple Telescopic Max. Torque: 180 KN-M Max Power: 18 KW Max.Drill Dia: 2 Meters RPM: 29.5 Mast High: 23 Meters Discharge Speed: 165 rpm Rotary: B 18-HS Prime Mover: Mercedes Benz OM-442A V Type 8 Cylinders, 354HP	1
6.	<b>CEZ-300</b> Make: Hughes Tool Co. Texas Model: CEZ-300 Kelly: 35 Meters Double Telescopic Prime Mover: GM 4 Cylinder	1
7.	<b>Hitachi Crane Digger KH-100</b> Make: Hitachi, Japan Model: KH-100 Kelly: 35 Meters, Triple Telescopic Max Drill Dia: 1200 mm Prime Mover: Hino Diesel, 6 Cylinder	1

<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>
8.	Heavy duty Augers 760 mm, 1 meter and 2 meters.	20
9.	Standard buckets 760 mm, 1 meter and 2 meters.	20
10.	Clean out buckets 760 mm, 1 meter and 2 meters.	20
	Note: (Buckets and Augers in other sizes can be fabricated in-house).	

#### **VIBRATORY AND PNEUMATIC PILE DRIVING HAMMERS:**

11.	<b>Hydraulic Vibratory Pile Driver/Extractor:</b> Make: PTC Vibrofonceur France. Type: 50 H4 (6.5 Tons) Power Pack: 540 CAT Prime Mover: Caterpillar CAT 3408 Engine 510 HP. Clamping Head: Duplex 2x110 Tons.	1
12.	<b>Hydraulic Vibratory Pile Driver/Extractor:</b> Make: PTC Vibrofonceur France. Type: 13 H 1 (2.15 Tons) Power Pack: 180F Prime Mover: John Deere Diesel Engine 155 HP. Clamping Head: Agriplex 55 Tons.	1
13.	<b>Sheet Piling Hammer (Air)</b> (1) Make: The British Steel & Piling Co. Ltd. London & Claydon - Suffolk. Size : 7 Serial : 1855 (2) Make: Tifine Roven, France.	2     1

#### **PILE TESTING EQUIPMENT:**

14.	Pile Load Test Equipment including loading girders, reaction girders, jacks, gauges etc for testing piles upto 1,000 Tons.	2 Sets
15.	Pile Load Test Equipment including loading girders, reaction girders, jacks, gauges etc for testing piles upto 4,000 Tons.	2 Sets
16.	Data Loggers, LVDT's and Computers for remote data collection of pile tests.	2 Sets

Item No.	Description	Nos. Held
17.	<p><b>Pile Dynamic Analysis (PDA) Equipment:</b></p> <p>Make: Pile Dynamic Inc. U.S.A.  Model: Pile Driving Analyzer® Model PAK</p> <p><b>Complete with accelerometers and strain gauges.</b></p> <p><b>Specifications:</b></p> <ol style="list-style-type: none"> <li>1) Four channels of strain data acquisition.</li> <li>2) Four channels of acceleration data acquisition and four integrators of acceleration to velocity.</li> <li>3) Impact and vibratory hammer monitoring modes.</li> <li>4) PC-Compatible Pentium Processor / Windows® interface.</li> <li>5) High-visibility transfective color LCD for outdoor viewing.</li> <li>6) Built-in-VGA external monitor port.</li> <li>7) Built-in-water-resistant membrane keyboard.</li> <li>8) 12-bit A/D converter with 8 channels at upto 20KHZ each.</li> <li>9) PDA-W software for data processing and analysis.</li> <li>10) PDILOT software for report quality data summary.</li> <li>11) GRLWEAP software for pile driving simulation.</li> <li>12) CAPWAP software for pile capacity analysis.</li> </ol>	1 Set
18.	<p><b>Pile Integrity Testing (PIT) Equipment :</b></p> <p>Make: Pile Dynamic Inc. U.S.A.  Model: Pile Integrity Tester (PIT)</p> <p>For Low Strain Integrity Testing with PIT-W software for analysis of testing data.</p>	1 Set
<b>MUD CLEANER (DESANDER):</b>		
19.	<p><b>Caviem Mud Cleaner:</b></p> <p>For removing sand from circulating mud/bentonite in large dia holes.</p> <p>Make: CAVIEM, France.  Model: SB 5/7  Nominal Max Allowable  Feed: 100 M3/HR</p>	2
20.	<p><b>Tremmie Pipes and Concrete Buckets:</b></p> <p>Special quick coupling tremmie pipes etc for placing large volumes of concrete in piles. (in 100 meter sets).</p>	10
21.	<p><b>Cage Fabrication Equipment</b></p> <p>Bar bending, cutting, and welding equipment for pile cage fabrication. Special mechanical coupling and Swaging equipment for large diameter bars (when welding is not permissible).</p>	4 Sets

## CONCRETING EQUIPMENT

Item No.	Description	Nos. Held
1.	<p><b>Concrete Batch Plant EZA 500/750:</b></p> <p>Make: LIEBHERR-MISCHTECHNIK GMBH.</p> <p>Model No: EZA 500/750</p> <p>Output: 26M<sup>3</sup>/H</p> <p>Prime Mover: Electric Motor.</p>	2
2.	<p><b>Concrete Batch Plant JS 1500E:</b></p> <p>Make: Shaoguan Xinyu Construction Machinery Co. Ltd.</p> <p>Model No: JS 1500E</p> <p>Output: 60m<sup>3</sup>/hour</p> <p>Prime Mover: Electric Motor.</p>	2
3.	<p><b>Concrete Batch Plant JS 1500G (HZS75K):</b></p> <p>Make: Shaoguan Xinyu Construction Machinery Co. Ltd.</p> <p>Model No: JS 1500G (HZS75K)</p> <p>Output: 75m<sup>3</sup>/hour</p> <p>Prime Mover: Electric Motor.</p> <p>Serial No. 7001</p>	1
4.	<p><b>Concrete Mixer PECO:</b></p> <p>Make: Pakistan Engineering Co. Ltd., Lahore.</p> <p>Model No: 011 - NT</p> <p>RPM of Drum: 1975</p> <p>Capacity: 24-Jul</p> <p>Primer Mover: PECO Diesel PV2A or Electric Motor.</p>	8
5.	<p><b>HINO Transit Mixer Truck ZM - 303:</b></p> <p>Make: HINO Motors Ltd., Japan.</p> <p>Model No: ZM - 303</p> <p>Capacity: 6 Cu.Yds</p> <p>Concrete Transit</p> <p>Mixer Make: KAYABA Industry Co. Ltd., Japan.</p> <p>Model No./Type: MR - 4473</p> <p>Primer Mover: Hino 6 Cyl. EK100</p>	4
6.	<p><b>HINO Transit Mixer Truck FS2KKC</b></p> <p>Make: HINO Motors Ltd., Japan.</p> <p>Model No: FS2KKC</p> <p>Capacity: 8 Cu.Yds</p> <p>Concrete Transit</p> <p>Mixer Make: KAYABA Industry Co. Ltd., Japan.</p> <p>Model No./Type: MR - 4473</p> <p>Primer Mover: Hino 6 Cyl. EK100</p> <p>Year of Manufacturing: 1997</p>	2

<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>
7.	<b>ISUZU Transit Mixer Truck:</b> Make: Isuzu Motors Ltd., Japan. Registration No. P2584 Capacity: 3.4 Cu.M (4.4 Cu.Yds) Chassis No. NRR32C-3000035 Engine No. 6HE1-634292 Engine Capacity: 180 H.P. Primer Mover: Isuzu Engine 6 Cyl.	1
8.	<b>Nissan Diesel Transit Mixer Truck:</b> Make: Nissan Diesel Japan. Registration No. LES-07 3352 & LES-07 4053 Model Nos: U-CW520HN & CW52AH Chassis No. 10233 & 19986 Engine No. RF-81586-51 & RF-83016-80 Nissan Diesel Engine: 8 Cylinder Year of Manufacturing: 1997	2
9.	<b>Concrete Pump MECBO:</b> Make: MECBO, Italy. Type: 180 700 Outlet: 4" Prime Mover: Deutz Diesel F4L 912.	1
10.	<b>Concrete Pump, Schwing:</b> Make: Schwing American Inc. Model No: WP-1250 Max Out put: 95 cubic yard/hour Concrete Pressure(Max): 65 Bar (942 psi) Power (Diesel Engine): Deutz BF 4M 1013 C 112 KW (150 HP)  Max.Horizontal Pumping Distance: 297.8m (977 ft.) Max. Vertical Pumping Distance: 86.9m (285 ft.) Max. Aggregate Size: 38.1mm (1.5 inch) Min. Concrete Slump: 0mm (0 inch)	
11.	<b>Concrete Vibrators, Internal</b> Make : Mikasa Sanguo Co. Ltd. Type : Pendulous. Prime Mover : Briggs & Stratton Gasoline/Petrol Engine.	40

<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>
12.	<b>Concrete Vibrators, External</b>	14
	Prime Mover:                      Electric Motor	
13.	<b>Ittefaq Tipper Deluxe:</b>	2
	Payload:                              1000 Kg.	
14.	<b>Water Chilling Plant (For Hot Weather Concreting):</b>	2
	Make:                                      P. Pulsometer	
	Model No:                              PPC/WCP-10/LH/R	
	Capacity:                                10,000 Litres/hour.	
	Chilled Water Temperature:    +8 Degree C	
15.	Steel Shuttering Complete Bridge Set.	4
16.	Steel Scaffolding with allied Couplers etc.	25,000 Rft.

## REVERSE CIRCULATION DRILLING EQUIPMENT

Item No.	Description	Nos. Held
1.	<b>Reverse Circulation Rig - IDROSONDA H-15</b>	2
	Make:                                    Construzioni Meccaniche Ferrara Bondeno, Italy.	
	Power:                                   Diesel Engine G.M. 6-71 I	
	Capacity:                               3m dia, bore maximum to 30m 500mm dia to 250m	
2.	<b>Reverse Circulation Rig - IVCC SP - 1</b>	1
	Fabricated by IVCC Engineering (Pvt) Ltd.	
	Power:                                   Diesel Engine 6-71 I	
	Capacity:                               3 m dia, bore maximum to 30m 500m dia to 250m	
<b>ACCESSORIES:</b>		
3.	R.C. Drill Rods	500m
4.	RC Bits Various sizes.	15
5.	Mud Pumps - On board with rigs & spares.	6





<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>
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2. **Longyear 44 Truck Mounted Core Drill with mast:** 1

**Capacity:**

<b><u>Rod Size</u></b>	<b><u>Depth</u></b>		<b><u>Hole Size</u></b>	<b><u>Core Size</u></b>
	<b><u>Feet</u></b>	<b><u>Meter</u></b>	<b><u>(MM)</u></b>	<b><u>(MM)</u></b>
AW	3100	945	48	30.1
AQ	4350	1325	48	27
BW	3200	975	60	42
BQ	3400	1035	60	36.5
BCQ	3950	1205	60	
NW	2500	760	75.7	54.7
NQ	2650	810	75.7	47.5
NCQ	3070	935	75.7	
CHD 76	2400	730		
HW	1600	490	99.2	76.2
HQ	1750	535	98	63.5
HCQ	2350	715		
CHD 101	1550	475		
PQ	1300	395	122.6	85

Angle Range: 360 Degree

Truck Mounted  
Prime Mover: Detroit Diesel, 3-53, water cooled,  
3 cylinder, 83 H.P. (62 KW)  
@2800 rpm.

Pumping Equipment: Longyear Model 535 RQ multi  
speed pumping unit powered by 24  
HP. Deutz Diesel Engine.

Rated Capacity: 10-35 gpm 800- 500 psi.

Item No.	Description	Nos. Held																																																					
3.	<p><b>Craelius D 900 Core Drill:</b></p> <p>Make: Craelius, Sweden</p> <p>Capacity: With steel Rods:</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2"><u>Drill Rod</u></th> <th colspan="2"><u>Hole Depth</u></th> </tr> <tr> <th><u>Size</u></th> <th>(Mtr)</th> <th>(Ft.)</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td>A</td> <td>900</td> <td>3000</td> <td></td> </tr> <tr> <td></td> <td>B</td> <td>575</td> <td>1900</td> <td></td> </tr> <tr> <td></td> <td>N</td> <td>500</td> <td>1650</td> <td></td> </tr> <tr> <td></td> <td>H</td> <td>325</td> <td>1050</td> <td></td> </tr> </tbody> </table> <p>With alumenium Rods:</p> <table border="1"> <tbody> <tr> <td></td> <td>A</td> <td>1200</td> <td>4000</td> </tr> <tr> <td></td> <td>B</td> <td>750</td> <td>2500</td> </tr> </tbody> </table> <p>Wire Line :</p> <table border="1"> <tbody> <tr> <td></td> <td>A</td> <td>900</td> <td>3000</td> </tr> <tr> <td></td> <td>B</td> <td>700</td> <td>2300</td> </tr> <tr> <td></td> <td>N</td> <td>500</td> <td>1650</td> </tr> <tr> <td></td> <td>H</td> <td>350</td> <td>1150</td> </tr> </tbody> </table> <p>Control : Hydraulic.</p> <p>Prime Mover : Perkins Engine 3 Cyl - 50 H.P. of Millat Tractor Ltd., Lahore.</p> <p>Model: 3 - 2500</p> <p>Drilling Angle Range: 0 - 360 Degree</p>		<u>Drill Rod</u>		<u>Hole Depth</u>		<u>Size</u>	(Mtr)	(Ft.)			A	900	3000			B	575	1900			N	500	1650			H	325	1050			A	1200	4000		B	750	2500		A	900	3000		B	700	2300		N	500	1650		H	350	1150	1
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4.	<p><b>Craelius XCH-90 Core Drill:</b></p> <p>Capacity:</p> <table border="1"> <tbody> <tr> <td>Hole dia:</td> <td>56 - 116 mm</td> </tr> <tr> <td>Core dia:</td> <td>42 - 86 mm</td> </tr> <tr> <td>Hole depth:</td> <td>300 metre</td> </tr> <tr> <td>Angle Range:</td> <td>360 Degree</td> </tr> </tbody> </table> <p>Control: Hydraulic.</p> <p>Prime Mover: Deutz Diesel Engine.</p> <p>Type: F2L/812 H.P. - 18</p>	Hole dia:	56 - 116 mm	Core dia:	42 - 86 mm	Hole depth:	300 metre	Angle Range:	360 Degree	1																																													
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5.	<p><b>Craelius AB 50G Core Drill :</b></p> <p>Capacity:</p> <table border="1"> <tbody> <tr> <td>Hole dia:</td> <td>56mm - 116mm</td> </tr> <tr> <td>Core dia:</td> <td>42mm - 86mm</td> </tr> <tr> <td>Hole depth:</td> <td>1000 feet</td> </tr> <tr> <td>Angle Range:</td> <td>90 Degree</td> </tr> </tbody> </table> <p>Control: Hand lever operated with rack and pinion.</p> <p>Prime Mover: Deutz Diesel Engine. H.P. - 18.</p>	Hole dia:	56mm - 116mm	Core dia:	42mm - 86mm	Hole depth:	1000 feet	Angle Range:	90 Degree	1																																													
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<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>																				
6.	<b>Craelius Pixie 71 Concrete Core Drill:</b>	2																				
	Capacity: Upto 12" dia holes in RCC, also 30m holes in 76mm dia.																					
	Prime Mover: Electric - 10 HP.																					
7.	<b>Atlas Copco Concrete Core Drill Pixie - 6 :</b>	1																				
	Hole diameter: Upto 225 mm (8.86 inch).																					
	Hole Depth: Maximum 10 m (32 feet).																					
	Prime Mover: Electric Motor 3.5 H.P.																					
8.	<b>Hilti Drill Rigs E-160</b>	2																				
	<b><u>DIAMOND CORE DRILLING ACCESSORIES:</u></b>																					
9.	<table border="0"> <thead> <tr> <th colspan="2"><u>Wireline Rods</u></th> <th colspan="2"><u>Wireline Casing</u></th> </tr> </thead> <tbody> <tr> <td>PQ</td> <td>900 ft.</td> <td>PW</td> <td>500 ft.</td> </tr> <tr> <td>HQ</td> <td>3000 ft.</td> <td>HW</td> <td>1500 ft.</td> </tr> <tr> <td>NQ</td> <td>2400 ft.</td> <td>NW</td> <td>600 ft.</td> </tr> <tr> <td>BQ</td> <td>1200 ft.</td> <td>BW</td> <td>1500 ft.</td> </tr> </tbody> </table>	<u>Wireline Rods</u>		<u>Wireline Casing</u>		PQ	900 ft.	PW	500 ft.	HQ	3000 ft.	HW	1500 ft.	NQ	2400 ft.	NW	600 ft.	BQ	1200 ft.	BW	1500 ft.	
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HQ	3000 ft.	HW	1500 ft.																			
NQ	2400 ft.	NW	600 ft.																			
BQ	1200 ft.	BW	1500 ft.																			
10.	Assorted lengths Wireline Core barrels & bits in all above sizes.																					
11.	Conventional drill rods in 114mm, 90mm, 89mm, 76mm, 50mm, NX etc., sizes totalling over 5000 ft.																					
12.	Conventional casing to cater for all above sizes totalling over 3000 ft.																					
13.	Assorted lengths of single and double and triple tube core barrels in all sizes.																					
14.	Wireline and standard fishing tools.																					



Item No.	Description	Nos. Held
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3. **Alfred Wirth Drill BO - 1A :** 1

Type: All Hydraulic Power Swivel with chain pull down with long & short masts.

Driving Motor: 30 HP

Capacity : (Wireline)	<u>Rod Size</u>	<u>Depth</u>
	AQ	1300 M
	BQ	1000 M
	NQ	850 M
	HQ	550 M
	PQ	400 M

Can drill holes upto 800 MM dia to depths of 250 M in loose formations and 540 MM dia to 200 M in hard formations.

Rig can be used universally for drilling for pressure grouting, anchor drilling in all directions, Auger and hollow stem Auger drilling, Core Drilling, Wireline Drilling, drilling for wells, blast holes, shot holes, ODEX etc., and for any other purposes where bore holes are required.

4. **Ingersoll Rand Drill - CM - 351** 1

Chain Feed Carrier: 1361 KG (3000 Lbs) Pullout Power.  
DTH Rotation Head: ARH-351

Capacity: Rotary : Depth: 150 M  
Hole size: 64 - 140 mm (2-1/2" - 5-1/2")  
Percussion: 150 M  
Hole size: 64-140mm(2-1/2"-5-1/2")

Boom: All Hydraulic.

**ACCESSORIES**

Drill Rods 90mm & 115 mm. 1500 ft.

## DOWN THE HOLE HAMMERS AND ODEX DRILLING EQUIPMENT

Item No.	Description	Nos. Held
1.	<b>ODEX - 165</b>	
	For the down-the-hole hammer COP 62, and down-the-hole hammer Mission A 53 - 15:	3
	Hole dia: 212 mm (8-11/32")	
	Casing tubes: O.D. 194 mm (7-41/64")	
	I.D. 182 mm (7-11/64")	
	Straight drilling hole dia: 152 - 216mm (6" - 8-1/2")	
	Can be used with Ingersoll-Rand Crawler drill, Crawlair CM-351, Wirth's drill BO - 50.	
	<b>NOTE:</b>	
	<b>DTH ODEX-115 and 165 can also be used with ROC 601 after minor modification.</b>	
2.	<b>ODEX - 115</b>	
	For Down-the-hole hammers, COP 4 Mk-2, COP 42.	7
	Hole dia: 152 mm (6")	
	Casing tubes: O.D. 140 mm (5-1/2")	
	I.D. 128 mm (5")	
	Straight drilling hole dia: 105 - 140 mm (4"- 4-1/2")	
	Can be used with Atlas Copco Crawler drill type ROC - 301 and Wirth's drill type BO-1, Ingersoll Rand's Crawlair CM - 351.	
3.	<b>ODEX - 76:</b>	
	For top hammer with rock drill type BBE - 57	2
	Hole Dia: 96 mm (3-25/32")	
	Casing tubes. O.D. 88.9 mm (3-1/2")	
	I.D. 78.8 mm (3-1/16")	
	Can be used with Atlas Copco's Crawler Drill type ROC- 601.	

## TUNNELLING EQUIPMENT

Item No.	Description	Nos. Held
1.	<p><b>TORO 151 Tunnel Loader</b></p> <p>Make: Sandvik Tamrock Corpn. Finland</p> <p><b>Capacity:</b></p> <p>a. Trimming Capacity: 3,500 Kg (7,716 lb)</p> <p>b. Breakout force, lift: 61 kN 6,220 Kg (13,710 lb)</p> <p>c. Breakout force, tilt: 55 kN 5,600 Kg (12,360 lb)</p> <p>d. Bucket range (SAE 2:1) 1,35 Cu.M - 1,75 Cu. M (1.8-2.3 Cu.Yd.) HB 500/400</p> <p><b>Weights:</b></p> <p>a. Operating weight: 8,700 Kg (19,180 lb)</p> <p>b. Total loaded weight: 12,200 Kg (26,897 lb)</p> <p><b>Dimensions:</b></p> <p>a. Total Length: 6,970mm (274")</p> <p>b Width without bucket: 1,420mm (56")</p> <p>c. Max width(with std bucket) 1,480mm (58")</p> <p>d. Height with safety canopy: 1840mm (72")</p> <p>e. Ground clearance: 260mm (10")</p> <p>f. Tunnel size 2.5m x 2.5m (depends on local regulations)</p> <p><b>Major Components</b></p> <p>a. Diesel Engine: Deutz F6L914, 71.5 KW</p> <p>b. Engine Output: 63 KW (84 hp) / 2300 rpm</p> <p>c. Gearbox Dana SOH, RT20324</p> <p>d. Axles: Dana SOH, 14D 1441 LCB</p> <p>e. Rear axle oscillation: ± 10 degree</p> <p>f. Tyres, size &amp; type: 12.00 - 20</p>	1

Item No.	Description	Nos. Held
2.	<b>Tamrock Quasar 1F Hydraulic Drill Jumbo</b>	1
	Make: Sandvik Tamrock Secoma S.A.S., France	
	Model: Quasar	
	Length: 9,090 mm	
	Width: 1,200mm	
	Height Roof Down: 1,850mm	
	Height Roof Up: 2,750mm	
	Turning Radius: 5,100-3,400mm	
	Noise Level: 98DB (A)	
	<b><u>Rock Drill:</u></b>	
	a. Model: HL 560S	
	b. Standard male shank: R 38 - T 38	
	c. Weight: 135 Kg	
	d. Impact Frequency: 52 - 59 Hz	
	e. Percussion Pressure: 160 - 210 bar	
	f. Impact Power: 14 - 19 KW	
	<b><u>Boom:</u></b>	
	a. Model: B 14 F	
	b. Type: Parallel holding	
	c. Weight(with hoses) 1,500 Kg	
	d. Feed roll-over: 360 degree	
	<b><u>Hydraulic Control System:</u></b>	
	a. Type: IBCQF	
	b. Control Functions: Auto smooth collaring, Precise anti-jamming, Only 1 control lever for thrust/percussion (full & half)	
	<b><u>Electro Hydraulic Power Pack:</u></b>	
	a. Electrical Motor: 45KW (60 hp)	
	b. Hydraulic Pump Type: Radical Piston Fixed displacement	
	Total Installed Power: 60 KW	
	<b><u>Bore Size:</u></b>	
	Long Hole Drilling: Drill Steel Drifting H32-H35 Drifter Rods. 39mm - 46mm dia.	
	Extension Rod: T38-T-45 Tube drig	
	Bolting: H25-H28	
	Shank: R38-T38-T45-R32	
	<b><u>Hole Diameters:</u></b>	
	Blast Hole: 43-51mm	
	Burn Cut Hole: 75-127mm	
	Long Hole: T38 64-76mm	
	Long Hole: T-45 76 - 89mm	
	Bolt Hole: 35 - 51 mm	
	<b>Prime Mover:</b> Deutz Diesel Engine F3L 912 W, 30KW(41 hp)	

Item No.	Description	Nos. Held
3.	<b>FAML-1 Diesel LHD One Cubic Meter</b>	2
	Make: Fambition Mining Technology Co. Ltd. China.	
	Model: FAML-1	
	<b><u>Main Data: Performance of the Integrated Equipment:</u></b>	
	a. Length: 5510mm	
	b. Width: 1260mm	
	c. Height: 1970mm	
	d. Bucket Capacity: 1 Cubic Meter	
	e. Weight, unladen: 6800 Kg	
	f. Payload: 2000 Kg	
	g. Max unloading angle: 45 Degree	
	h. Max tractive force: 50 KN	
	j. Tyre: Model: 10.00-20G2 0.6-0.7MPa	
	k. Electrical system: Operating voltage: 24V Alternator: BOSCH28V/40A Stator: BOSCH4KW/24V	
	l. Filling System: Fuel tank: 120 L, Hydraulic tank: 110L Driving tank: 120 L	
	m. Fireproofing Configure: Type: Manual Fire Extinguisher	
	o. <b>Cab:</b> Structure: High Intensity Standard Safety Depend Canopy.	
	<b><u>LHD Technical Data: Configuration of the Integrated Equipment:</u></b>	
	a. <b>Engine:</b>	
	(1) Design: Air-cooled diesel engine two-stage	
	(2) Model: BF4L2011 (imported from Germany)	
	(3) Power: 53KW/2300 rpm	
	b. <b>Variable Pump:</b>	
	(1) Manufacturer: Eaton Electrical Company in USA	
	(2) Model: ACA332314ROA	
	c. <b>Variable Motor:</b>	
	(1) Manufacturer: Eaton Electrical Company in USA	
	(2) Model: ACE544114MAA	
	d. <b>Axle:</b>	
	(1) Manufacturer: Jiangxi Fenyi Axle Co. Ltd.	
	(2) Model: PC15	
	e. <b>Brake:</b>	
	(1) Service brake: Disc brake assembly acts on four wheels.	
	(2) Parking brake: Central caliper disc hydraulic brake, brake	
	f. <b>Steering:</b>	
	(1) Design: Centre hinge joint, hydraulic drive steering.	
	(2) Steering angle: 36 Degree (right, left)	
	(3) Inner clearance circle: 2350mm	
	(4) Outer clearance circle: 4100mm	
	g. <b>Hydraulic System:</b>	
	(1) Operating system flow: 60 M/min	
	(2) Highest operating pressure: 14 MPA	
	(3) Steering pump flow: 30 L/min	
	(4) Steering system pressure: 7MPA	

**PNEUMATIC/HYDRAULIC LIGHT HAND  
DRILLS/BREAKERS/HAMMERS**

Item No.	Description	Nos. Held
1.	<b>Rock Drill 322-D:</b> Make: Furukawa, Japan Approx Drilling Depth: 10 - 15 feet.	2
2.	<b>Rock Drill RH-571-5L :</b> Make: Atlas Copco, Sweden Approx. Drill Depth: 10-25 feet.	1
3.	<b>Rock Drill CP-32 AW:</b> Make : Consolidated Pneumatic. Chicago, U.S.A. Approx. drill depth: 10-12 feet.	1
4.	<b>Concrete Breaker TCB-300/71052</b> Make: Toku Pneumatic Tool	4
5.	<b>Pick Axe TY AB-30</b> Make: Toyo, Japan	2
6.	<b>Chipping Hammer 302 - 427</b> Make: Toku Pneumatic Tool	3
7.	<b>Hydraulic Rig-mounted Breaker TEX 250 HI.</b> Make: Atlas Copco	1
8.	<b>Hydraulic Rig-mounted Breaker TEX-600 HW1.</b> Make: Atlas Copco	1
9.	<b>Concrete Breaker, Electric</b> Make: BOSCH, Germany Type: 825 Motor: 1800 Watt, 220 V	1
10.	<b>Stoper</b> Make: Toyo, Japan Weight: 40 Kg. Rod: 7/8" Drilling Depth: 6 Meters	6

## DEMOLITION EQUIPMENT

Item No.	Description	Nos. Held
1.	<b>Brokk 250E Remote Controlled Hydraulic Demolition Unit.</b>	1
	Make: Holmhed Systems AB, Sweden.	
	Motor Rating: 22 KW	
	Hydraulic Pressure: 18-150 bar (260-2175 psi)	
2.	<b>Ventilation Fans</b>	10
	Make: Woods of Colchester, U.K. &	
	Outlet: 38" (965mm dia.) 2 Nos.	
	18" (460mm dia.) 2 Nos.	
	14" (355mm dia.) 6 Nos.	
3	<b>Blowers Fans</b>	2
	12" (305mm dia.)	
4.	<b>Ventilation Duct</b>	580 meters

## EXCAVATION EQUIPMENT

Item No.	Description	Nos. Held
1.	<p><b>Hydraulic Crawling Excavators EX-200:</b></p> <p>Make: Hitachi Japan</p> <p>Model: EX-200</p> <p>Prime Mover: ISUZU 6Bd1-T</p>	4
2.	<p><b>JCB Excavator:</b></p> <p>Make: JCB Bamford (Excavators) Ltd., UK</p> <p>Model: 3 D II</p> <p>Attachment: With Front End Loader and rear digging bucket.</p>	1
3.	<p><b>Wheel Loader Mega-200:</b></p> <p>Make: Daewoo Heavy Industries Ltd., South Korea</p> <p>Model: DB58T</p> <p>Capacity: Bucket Capacity 1.8m<sup>3</sup></p> <p>Weight: Operating weight: 9,950 Kg.</p> <p>Demensions: Overall length : 6,952mm Overall width: 2,450mm Overall height: 3,214mm Ground clearance: 406mm</p> <p>Turning radius: 4,9m</p> <p>Prime Mover: 2D Diesel Fuel EPA 6 cyl.</p> <p>Out put: 101.5Kw/2,300 rpm</p>	2

## PERCUSSION/CABLE TOOL DRILLING EQUIPMENT

Item No.	Description	Nos. Held
1.	<b>A.S.C.I. Winch (Double Drum) -A - 4000 SR 2C:</b>	1
2.	<b>A.S.C.I. Winch (Single Drum) -A - 4000 SR 2C:</b> Dynamic Line Pull : 8900 Lbs Static Line Pull : 15500 Lbs. Capacity : 750 mm dia to 50m 400 mm to 200m Bore depth upto 16" dia: 500 feet.  Prime Mover: Electric Or Diesel Engine: - 60 H.P.	6
3.	<b>F-25 Winch (Single Drum):</b> Dynamic Line Pull : 8000 Lbs. Static Line Pull : 14000 Lbs. Capacity : 750mm dia to 50m. 400mm dia to 175m.  Prime Mover: Electric or Diesel Engine - 50 HP.	2
4.	<b>Sykes MK5 Winch:</b>  Make : Henry Sykes Ltd Capacity : Holes upto 400mm dia upto 70m  Prime Mover: Electric or Diesel - 20 HP.	7
5.	<b>Atlas Copco Air Winch A-10 :</b> Capacity:       Max load :                   1 ton       2200 lbs Air Consumption :       42 I/S       89 Cfm	3

### PERCUSSION DRILLING ACCESSORIES

6.	Heavy Duty Tripods / Derricks.	10
7.	Light Duty Tripods.	12
8.	Percussion Drilling Casing in sizes of sorts i.e. 1 meter, 28-1/2",	5,000 feet
9.	Percussion Drilling Bailers in all casing sizes.	30
10.	Percussion Drilling Heads in all casing sizes.	40

## GROUTING EQUIPMENT

Item No.	Description	Nos. Held
1.	<b>Grout Mixer Colcrete Double Drum, 2 Stage:</b> Capacity: 60 mixes per hour. 240 cubic feet of grout per hour.  Discharge Pressure: 20 Lbs/Psi.	4
2.	<b>Grout Mixer Colcrete Single Drum - Single Stage:</b> Capacity: 50 - 60 mixes per hour. Each mix 3 - 4 Cu.ft.  Discharge Pressure: 18 - 20 Lbs/psi.	1
3.	<b>Grout Mixer Craelius - CEMIX 175 E:</b> Capacity: 175 Litres / minute.	4
4.	<b>Grout Agitator CEMAG - 350 E:</b> Make: Craelius, Sweden. Capacity: 350 Litres.	1
5.	<b>Grout Agitator, Cementation :</b>  Make: The Cementation Co. Ltd. Capacity: 80 Gallon. <b>Note: Arrangements to operate with electric or compressed air</b>	8
6.	<b>Grout Pump, Craelius ZBE:</b> Make: Craelius, Sweden. Capacity: 0 - 90 L/Min. Groute Pressure Range: 0 - 100 bar.	7
7.	<b>Grout Pump, Craelius ZH - 50:</b> Capacity: 0 - 50 L / Min. Grout Pressure Range: 0 - 1000 psi.	1
8.	<b>Grout Pump Cementation 2" :</b>  Capacity: 0 - 90 Ltr/Min.  Grout Pressure Range: 0 -1000 psi.	4

### GROUT ACCESSORIES

9. In house facilities for design and manufacture of packers, seals etc.
10. Ample stocks of hoses, unions, junctions etc.

## GUNITE/SHOTCRETE EQUIPMENT

Item No.	Description	Nos. Held
1.	<p><b>Boulder Concretor (Guniting Gun):</b></p> <p>Make: Boulder Equipment Ltd.            Type: S - 2 - A Type F.            Output : Upto 1 Cu Mtr/Hour.</p>	4
2.	<p><b>Boulder Pneumatic Refractory Gun :</b></p> <p>Make: Boulder Equipment Ltd.            Type: H - 5            Output: Upto 1.5 Cu.Mtr / Hour.</p>	2
3.	<p><b>Aliva Shotcrete Gun:</b></p> <p>Make: Aliva, Switzerland.            Type: Aliva-250            Output: Upto 2 Cu Mtr/Hour.</p>	1
4.	<p><b>New Boulder Supa Pump (For use with Guniting Gun)</b></p> <p>Make: Boulder Equipment Ltd.            Type: Double acting, Piston Pump.            Capacity: 120 = 720 GPH.</p> <p>Max Water Pressure: 350 psi (24 bar).</p>	6
5.	<p><b>Ample Stocks of Air and Water Hoses, Nozzles and Control accessories.</b></p>	

## DEWATERING EQUIPMENT

Item No.	Description	Nos. Held
1.	<b>Jetting Pump :</b> Make: John W. Stang Corporation Well Point System & Pumps, USA. Prime Mover: Electric Motor 50 H.P. Siemens	1
2.	<b>Well Point Pumping Set :</b> Make: John W. Stang Corporation, USA. Model : 710 Suction Delivery: 8" x 8" 2500 gpm. Priming: Vacuum System. Prime Mover: GM Diesel Model 3 - 71.	6
3.	<b>Well Point Sets, Comprising of:</b> Well Points, Riser Pipes, Header Pipes and Swing Joints	Approx 1,000 sets
4.	<b>FLYGT Submersible Pump:</b> Make: FLYGT Overseas, Sweden. Model: 2250.011 Prime Mover: Electric Motor Driven. Outlet: 8" Capacity: 125 l/s at 25 M Head	2
5.	<b>FLYGT Submersible Pump:</b> Make: FLYGT Overseas, Sweden. Prime Mover: Electric Motor Driven Outlet: 4" Capacity: 30 l/s at 25 M Head	2
6.	<b>FLYGT Submersible Pump (For Mud):</b> Make: FLYGT Overseas, Sweden. Model: 2250.011 Prime Mover: Electric Motor Driven Outlet: 4" Capacity: 30 l/s at 30 M Head	2
7.	<b>ZENIT Submersible Pump:</b> Make: ZENIT Elektro Pumpe, Italy Prime Mover: Electric Motor Driven Outlet: 3" Capacity: 30 l/s at 60 M Head	1
8.	<b>Vacuum Pump :</b>	1
9.	<b>Sump Pump :</b>	1

## AIR COMPRESSORS

Item No.	Description	Nos. Held
1.	<p><b>Ingersoll Rand DR - 250 CFM:</b></p> <p>Normal Operating Pressure: 7 bars            Actual Delivery: 250 cfm.            Prime Mover: GM Diesel: Model 4 - 53</p>	1
2.	<p><b>Atlas Copco Portable Air Compressor XRH-350 Dd:</b></p> <p>Maximum Working Pressure: 22 bars            Normal Working Pressure: 18 bars            Free Air Delivery: I/S 350 (742 cfm)            Prime Mover: Deutz Diesel Engine F12L 413 F</p>	1
3.	<p><b>Atlas Copco Portable Compressor XR-210 Dd :</b></p> <p>Maximum Working Pressure: 12 bars            Normal Working Pressure: 7 bars            Free Air Delivery at full load and pressure at 7 bars: 210 L/S (450 cfm).            Prime Mover: Deutz Diesel Engine FB 6 L 913</p>	1
4.	<p><b>Atlas Copco Portable Compressor XA 350 Dd:</b></p> <p>Maximum Working Pressure: 8.8 bars            Normal Working Pressure: 7 bars            Free Air Delivery at full load and pressure at 7 bars: 350 I/S (742 cfm)            Prime Mover: Deutz Diesel Engine F8L 413 F</p>	2
5.	<p><b>Atlas Copco Portable Compressor XA 210 Dd:</b></p> <p>Max Working Pressure: 8.5 bars            Normal Working Pressure: 7 bars            Free Air Delivery at normal working pressure: 210 I/S (445 cfm)            Prime Mover: Deutz Diesel BF 6 L/913 Air Cooled</p>	1
6.	<p><b>Atlas Copco Portable Compressor XA 400 Cud :</b></p> <p>Max Working Pressure : 8.5 bars            Normal Working Pressure : 7 bars            Free air delivery at Normal working pressure: 395 I/S (835 xfm)            Prime Mover: Cummins Diesel ( Water cooled) NT-855-C280</p>	1
7	<p><b>Portable Screw Air Compressor with Canopy:</b></p> <p>Make: Air Man            Model: PDS 125S            Prime Mover: ISUZU Engine MFG-240, 4 Cylinders</p>	1

<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>
8	<b>Portable Air Compressor Puma</b>	1
	Make: Puma Industries Co. Ltd.	
	Model: PK 50/60	
	Capacity: 751 lit/min	
	Prime Mover: Electric Motor 5HP	
9	<b>Portable Air Compressor PDS 125</b>	1
	Make: Airman Japan	
	Model: PDS 125	
	Prime Mover: Yanmar 3TN 84L-RHK	
10	<b>Portable Air Compressor PDS 175 S</b>	1
	Make: Airman Japan	
	Model: PDS 175 S	
	Prime Mover: ISUZU 4 Cyl.	

## GENERATING SETS

Item No.	Description	Nos. Held
1.	<b>Volvo Electric Generator AC 250 KVA</b> Make: Volvo Penta Engine U.K. Rating: 250 KVA Model: T1D121FG Prime Mover: Engine # 97144 1248006	1
2.	<b>Cummins Electric Generator AC 200 KVA</b> Make: Cummins U.K. Rating: 200 KVA Model: C22D5 Prime Mover: Cummins Engine (4B3.3-GI) 6 Cylinders	1
3.	<b>Electric Generator AC 200 KVA</b> Make: Marathon Electric, Wisconsin, U.S.A. Rating: 200 KVA Prime Mover: G.M. Engine 6-71 T	1
4.	<b>Detroit Generator 125 KVA:</b> Rating: 100 KW/125 KVA Prime Mover: Detroit Diesel 6-71	1
5.	<b>Caterpillar Generator</b> Rating: 150 KVA Prime Mover: Caterpillar Diesel Engine V-8, 3208	1
6.	<b>Mez Generator A12A4:</b> Rating: 125 KVA, 100 KW.(230/400 Volts) Power (Prime Mover) : Detroit Diesel 6-71	1
7.	<b>F.G.Wilson Generators, P 100:</b> Make: F.G. Wilson (Engineering) Ltd., U.K. Rating: 100 KVA (80 KW (400/230 Volts) Prime Mover: Perkins Diesel, Model YB 50367, 6 Cylinder	1
8.	<b>Olympian Generator</b> Rating: 100 KVA Prime Mover: Caterpillar Diesel Engine 6 Cylinders.	1
9.	<b>Partner Leroy Somer Generator LSA 44 L5 ACT:</b> Rating: 100 KVA (KW 80) Power: Deutz Diesel Engine F6L413	1
10.	<b>SDMO Generator</b> Rating: 100 KVA Prime Mover: Cumins Diesel 6 Cylinders, 6 BT 5.9	1
11.	<b>GM Power 93 KVA:</b> Rating: 93.75 KVA (75 KW) Prime Mover: Detroit Diesel 6-71 - In Line	2
12.	<b>Nippon Generator</b> Rating: 45 KVA Prime Mover: Hino Diesel Engine 6 Cylinders	1

<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>
13.	<b>Synchronous Generator TZH-40</b> Rating: 50 KVA Prime Mover: GM Diesel Engine (4-71)	1
14.	<b>Tempest Generator:</b> Rating: 37 KVA (220/440 Volts) Power: Perkins Diesel Engines 4 Cylinders	2
15.	<b>Lister Generator :</b> Rating: 34.4 KVA. (240/410 Volts) Power (Prime Mover): BELARUS 4 Cyliners, 50 H.P.	1
16.	<b>Synchronous Generator, STC-TH:</b> Rating: 25 KVA Prime Mover: Detroit Diesel 2-71	1
17.	<b>Synchronous Generator, MSA - TH:</b> Make: King Electric Mfg Co. China Rating: 12 KW (400 Volt) Prime Mover: Deutz Diesel Model F2L 912	2
18.	<b>Synchronous Generator, ST-2:</b> Rating: 2 KW Prime Mover: Huangshan Diesel 170 F	6
19.	<b>Honda Generator, EG 1800:</b> Rating: 1.5 KVA Prime Mover: Honda	1
20.	<b>Robin Generator, R-650:</b> Rating: 450 - 500 W Prime Mover: Robin Petrol Engine	2
21.	<b>Robin Generator, R-650:</b> Rating: 450 - 500 W Prime Mover: Robin Petrol Engine	2
22.	<b>AC Synchronous Generator, STC-20:</b> Make: Shan Dong Tractor Works Engine, China Rating: 20 KW Prime Mover: 2 Cyl. Model 295D , China.	1
23.	<b>AC Synchronous Generator, STC-50:</b> Make: Shan Dong Tractor Works Engine, China Rating: 50 KW Prime Mover: GM 4 Cyl. Model 10438030 , U.S.A. Serial No. 4A262316	1

## WELDING GENERATORS

Item No.	Description	Nos. Held
1.	<b>Deutz Welding Generator:</b>	1
	Prime Mover: Ford Diesel 4 Cylinders	
2.	<b>Dolmel Welding Motor-Generator, BW 23U:</b>	3
	Prime Mover: Electric Motor/GM Diesel 2-71	
3.	<b>MEZ Welding Generator:</b>	1
	Prime Mover: Electric Motor	
4.	<b>Detroit Welding Generator:</b>	1
	Prime Mover: GM Diesel 2-71	
5.	<b>Welding Rectifier Descon:</b>	10
	Model: WR 400M	
	Input: 380/440 V, AC	
	Output: 40 - 400 AMP, DC	
6.	<b>Welding Rectifier Pak Arc:</b>	4
	Model: Pak Arc DC 500 Rectifier	
	Input: 55A	
	Output: 40-500A	
7.	<b>Welding Transformers</b>	14
	Input: 380/440 V, AC	
	Output: 50 - 70 V	

## GENERAL & MULTIPURPOSE PUMPS

Item No.	Description	Nos. Held
1.	<p><b>GASO, Pump:</b></p> <p>Model: 1860            Pump (Liner) Size: 4-1/2" x 6", 3" x 6"            Capacity: GPM 47 - 112            Primer Mover: G.M. Engine 3-71            Make: GASO Pumps, U.S.A.</p>	4
2.	<p><b>Longyear Flush Pump:</b></p> <p>Model: 535 RO/Triplex.            Trade Mark: Bean Royal.            Capacity: 35 GPM.            Prime Mover: Deutz Diesel F 2L912</p>	3
3.	<p><b>FMC Flush Pump:</b></p> <p>Model: W 1122 BCD.            Horse Power: 25.5            Capacity: 37 GPM            Prime Mover: Deutz Diesel, Type F2L 511</p>	2
4.	<p><b>RICE Water Pump:</b></p> <p>Make: Rice            Model: 90 M            Capacity: 90,000 GPH            Prime Mover: GM Diesel 3-53</p>	1
5	<p><b>High Pressure Cleaning P/P :</b></p> <p>Make: Arimitsu Industry Co. Ltd.            Model: T-560            Working Pressure: 40 Kg/cm<sup>2</sup>            Capacity: 39.2/40 l/min            Electric Motor: 3.7 Kw</p>	1

**Note :**

These pumps do not include the pumps which are fitted to the

Item No.	Description	Nos. Held
5.	<b>KSB Water Pump KWPZ:</b> Model: KWPZ 100/400 Suction/Delivery: 5" x 4" Capacity: 748 GPM Prime Mover: GM Diesel 3-71	2
6.	<b>KSB Water Pump KWP:</b> Model: KWP 100/400 Suction/Delivery: 5" x 4" Capacity: 1.5 Cusec (562 GPM) Prime Mover: GM Diesel or Electric Motor.	1
7.	<b>Pump 5" x 4", NICE:</b> Horse Power 10 Capacity 450 GPM Prime Mover Detroit Diesel 3-71	3
8.	<b>Pump 5" x 4", NICE:</b> Horse Power 10 Capacity 450 GPM Prime Mover Dongfong Diesel, Model S 1100	4
9.	<b>Pump 3" x 2-1/2", NICE:</b> Horse Power 5 Capacity 160 GPM Prime Mover Electric Motor	2
10.	<b>Pump 6" x 5", NICE:</b> Horse Power 20 Capacity 800 GPM Prime Mover Electric Motor or GM Engine	1
11.	<b>Pump 6" x 5", YALLY:</b> Horse Power 15 Capacity 750 GPM Prime Mover Electric Motor 15 H.P.	1
12.	<b>Pump 5" x 5" PLAZA:</b> Horse Power 15 Capacity 750 GPM Prime Mover Dongfong Diesel Engine 1 Cylinder	1
13.	<b>Pump 3" x 2-1/2" KSB:</b> Horse Power 20.9 Capacity 300 GPM Prime Mover Electric Motor	4

## DEEPWELL TURBINE/SUBMERSIBLE PUMPS

Item No.	Description	Nos. Held
1.	<b>Deepwell Turbine Pump:</b> Type: 14 W.C. Capacity: 2400 gpm. Make: BECO Industries Ltd., Lahore Arrangements available: With electric motor & Diesel	1
2.	<b>Deepwell Turbine Pump:</b> Type: B - 175 Capacity: 800 gpm Make: BECO Industries Ltd., Lahore.	1
3.	<b>Deepwell Turbine Pump:</b> Type: 8 MC Capacity: 225 gpm Make: BECO Industries Ltd., Lahore.	1
4.	<b>Deepwell Turbine Pump:</b> Type: 10 MC Capacity: 350 gpm Make: BECO Industries Ltd., Lahore	2
5.	<b>Deepwell Turbine Pump:</b> Type: B/10-D/4 Capacity: 800 gpm. Make: KSB Pumps Manufacturing Co. Ltd..	2
6.	<b>Deepwell Turbine Pump:</b> Type: B/8-D/9 Capacity: 400 gpm Make: KSB Pumps Manufacturing Co. Ltd.	2
7.	<b>Deepwell Turbine Pump:</b> Type: B/10-B/4 Capacity: 400 gpm Make: KSB Pumps Co. Ltd.	4
8.	<b>KSB Submersible Pump:</b> Make: KSB Pumps Company Ltd. Type: BPH - 272/15 Capacity: 150 IGPM at 500 Ft. Head.	1

## WELL DEVELOPMENT AND TESTING UNITS

Item No.	Description	Nos. Held
1.	Right angled gear drive D&T Units, suitable for developing and <b>Note: Arrangements with electric &amp; diesel drives available.</b>	6
2.	<b>Vertical Hollow Shaft Motor:</b>  Type: IPM 2135 - 4YD 44 Rated Output: 25 HP. Make: Siemens Pakistan Engineering Co.Ltd.	8
3.	<b>Vertical Hollow Shaft Motor:</b>  Type: B Rated Output: 20 HP. Make : Newman Electric Motors Inc, NEWYORK, NEW JERSEY.	3
4.	<b>Vertical Hollow Shaft Motor:</b>  Type: NK Rated Output: 10 HP Make: BECO Industries Ltd., Lahore	1

**GEOTECHNICAL INVESTIGATION  
ACCESSORIES/INSTRUMENTS**

Item No.	Description	Nos. Held
<b>SAMPLING, TESTING AND PROBING EQUIPMENT</b>		
1.	<p><b>Hydraulic Deep Sounding Apparatus for Dutch Cone Penetrometer tests.</b></p> <p>Make: N.V. Goudsche Manchinefabrick,</p> <p>Prime Mover: Electric Motor</p>	1
2.	<p><b>Field Vane Torsion Head :</b></p> <p>Make: Farnell, England.</p> <p>Complete with various sizes of vanes and extensive lengths of</p>	1
3.	<p><b>IOWA Borehole Shear Tester :</b></p> <p>For in-Situ Shear testing of Cohesive Soils.</p> <p>Make: W.N. Handy Inc., USA.</p>	1
4.	<p><b>S.P.T. Sets:</b></p> <p>Simple valve and basket type valves available to suit the split spoon sampler in loose and broken strata.</p>	10
5.	<p><b>Auger Boring:</b></p> <p>Complete sets with standard fittings to obtain disturbed samples and a wide range of IWAN and earth augers from 3" to 10".</p>	6
6.	<p><b>Undisturbed Sampling Equipment:</b></p> <p>Shelby tubes, UDS tubes, thin walls liners of various dimensions, Dension Samplers, Pitcher Sampler, Piston Sampler Swivel type double tube core barrels with liner and Mazier triple tube core barrels with variable core lifter case. These tubes can be used by manual press and hydraulic operated rotary rigs.</p>	

<b>Item No.</b>	<b>Description</b>	<b>Nos. Held</b>
7.	<b>Soil &amp; Material Testing Laboratory:</b>  Complete Soil Mechanics and Material Testing Laboratory equipment from Soiltest Inc., of USA, capable of carrying out all types of soil and material tests and geological sampling.	
8.	<b>Surveying and Levelling Equipment, including Theodolites and Levelling Instruments, etc:</b>	
	(1) Theodolite 10C, Sokkisha.	2
	(2) Theodolite Wild.	2
	(3) Level B1C, Sokkisha.	1
	(4) Level Wild.	3
	(5) Tripods for Theodolites/levels.	11
	(6) Staff double face, Ft/Mtr. folding type. (Metallic).	7
	(7) Staff 3 face	1
	(8) Total Station SET-5A (Electronic) - Sokia NTS-355, NTS-325	3 Sets
	(9) Total Station TOP Cone GTS-229, GTS-239	3 Sets
	<b>SOIL/EARTH COMPACTOR</b>	
9.	Compactor Plate Type	2
10.	Vibratory Roller Compactor Light Duty	1

## OFFSHORE DRILLING SUPPORT EQUIPMENT

Item No.	Description	Nos. Held
1.	<p><b>Floating Platform:</b></p> <p>Modular Unifloate pontoons Construction/Self anchoring.</p> <p>Maximum Size:                   48' by 40'</p> <p>Loading Capacity:               60 Tons</p>	2
2.	Fiber Glass Boat Z - 19s.	1
3.	Fiber Glass Boat F - 14 Capable of individual operation or connected as Platform.	5
4.	Out Board Motors Suzuki 25 HP.	3
5.	Outboard Motors Suzuki 40 HP.	9
6.	Outboard Motors Suzuki 55 HP.	3

## UNDER WATER CUTTING EQUIPMENT

Item No.	Description	Nos. Held
1.	<b>UNDER WATER CUTTING LANCES/TORCHES</b>	
	Manufacture: M & G Brenntechnik AG,	
	<b>Details of WEKA Torches etc:</b>	
	WEKA Torch UW 12B x 2 M	366
	WEKA Torch UW 16B x 2 M	18
	WEKA Torch UW 16B x 4 M	20

## MISCELLANEOUS EQUIPMENT AND STORES

Item No.	Description	Held
1.	Slipforming jacks, hoists and allied equipment for slipforming of silos, chimneys, towers etc.	
2.	Ancillary equipment and stores for highly specialist works such as Guniting, Grouting, Colcreting, Underpinning, Tunnelling, Mining, Shaft Sinking Blasting etc.	
3.	Steel Scaffolding with allied Couplers etc.	
4.	Ample stocks of spare parts to feed all machinery. Spares inventory runs to over 25,000 items.	
5.	Extensive Camping and Kitchen equipment for the field.	
6.	<p><b>COMPUTERS:</b></p> <p>25 Nos. Apple Macintosh E Mac, i Mac, Mac Mini, Lap Tops (G5,G4 &amp; G3), Power PC, IIsi, MAC IIVx, MAC IICx Classic II, LC 475, SE/30 &amp; Pentium Personal Computers networked with Apple Laserwriter, HP Color LaserJet 4550N, Laser Writer 1600/600 PS, HP LaserJet 2100-B, HP Laser Jet 4M, HP Laser Jet P2015 Series (052CFF), HP Laser 5MP, Epson and DeskWriter Printers to produce in house colour graphics and DTP output. All offices, stores, technical and design functions are computerised for optimum efficiency.</p>	
7.	<p><b>WORKSHOP EQUIPMENT:</b></p> <p>A. Lathes, Shapers, Drilling, Cutting, Forging, Grinding, Furnacing, Welding &amp; Pipe Rolling Machines, Wire Jacks, Chain Pulley Block, Hydraulic Jacks, etc. injection laboratory for Detroit Diesel Engines.</p> <p>B. Complete engine overhauling facility with high tech fuel injection laboratory for Detroit Diesel Engines.</p>	
	<p><b>TRANSPORT / TRACTORS:</b></p>	
8.	A fleet of approx 50 vehicles consisting of heavy and light transport units e.g. pick-ups, tractors and trollies, Vans, Jeeps, Cars, etc., to meet the requirements of field and station duties.	