





<b>2.3</b>	<b>SUBSTRUCTURE</b>	Manufacturer: RG Petro Machinery (Manufacture date 2012) Model: ZZT225D II Rotary Table to Ground Level: 19ft 8in (6m) on rig mats Weight: 13.5 ton Setback area carrying capacity: 6,560ft / 2,000 mtrs Setback Capacity: 265,000 lbs Rotary Table Beams Capacity: 500,000 lbs Rotary Table Beams to Ground Level: 15ft 7in clearance under Rotary beams
<b>2.3.1</b>	<b>Sub Base Raising Winches</b>	Manufacturer: <i>Not applicable on this rig</i> Model: Maximum Load: Quantity:
<b>2.4</b>	<b>DRILLING LINE</b>	Manufacturer: Bridon Rope Diameter: 1" Length: 3,280 ft / 1,000 m Construction: 6 x 19 I.W.R.C, E.I.P.S Bright, RH Ord Lay Breaking strength single pull: 116.4 kbs / 517.8 kN
<b>2.5</b>	<b>TRAVELLING BLOCK</b>	Manufacturer: NOV Model: IDECO 110 SHORTY, UTB 110-3-30 API Working Load Strength Rating: 220,000 lbs API Bearing Rating @ 100 rpm: 240,000 lbs Number & size of Sheaves: 3 of x 30" diameter Sheaves grooved to suit: 1" drill line Quantity: 1 off
<b>2.6</b>	<b>ELEVATOR LINKS</b>	Manufacturer: BJ Size: 108" long Load Capacity: 125 ton (derated) Quantity: 1 set (2 per set)  Manufacturer: BVM Size: 72" long Load Capacity: 150 ton Quantity: 1 set (2 per set)
<b>2.7</b>	<b>WINCHES</b>	
<b>2.7.1</b>	<b>Hydraulic Service Winch</b>	Manufacturer: Braden Model: PD-12 Rated Line Pull > 1 <sup>st</sup> Layer: 12,000 lbs Quantity: 2 off Line Size: 16 mm x 80m
<b>2.7.2</b>	<b>Man-Rider Winch</b>	<i>Not applicable on this rig.</i>
<b>2.8</b>	<b>CASING STABBING BOARD</b>	Manufacturer: Engineered stabbing board Type: Fixed height Safety: Static Line Quantity: 1 off

**3 CIRCULATING EQUIPMENT**

<b>3.1 MUD TANKS:</b>	Total Active Capacity:	390 barrels
	Total Pre-Hydration Capacity:	39 barrels
<b>3.1.1 Tank No.1 (Suction Tank)</b>	Total Capacity:	197 barrels
	Pill Tank:	34 barrels
	Mixing Tank:	39 barrels
	Active Tank:	58 barrels
	Cooling Tank:	66 barrels
<b>3.1.2 Tank No.2 (Shaker Tank)</b>	Total capacity:	193 barrels
	Sand Trap:	14 barrels
	Settling Tank #1:	59 barrels
	Settling Tank #2:	66 barrels
	Settling Tank #3:	54 barrels
<b>3.2 SURFACE LINES</b>	Welded 4" NB, 3,000psi WP, with 4" NB Fig 602/1002 hammer unions	
<b>3.3 STANDPIPE</b>	Welded 3" NB, 3000 psi WP, with 3" NB Fig 602/1002 hammer unions, 60° gooseneck.	
<b>3.4 SHOCK HOSE</b>	Size:	3" ID x 13ft x 5000 psi WP
	Connection:	4" Figure 1002 / 1003 Hammer Union
	Quantity:	2 off
<b>3.5 KELLY HOSES</b>	Size:	2-1/2" ID x 55 ft x 5,000 psi working pressure
	Connection:	3" Fig 602 / 1502 Hammer unions
	Quantity:	1 off
<b>3.6 SHALE SHAKERS</b>	Manufacturer:	Drilling Fluids Engineering
<b>Note:-All shaker screens are supplied by the Operator</b>	Model:	SCR-01
	Capacity:	500 gpm with 110 mesh screens
	Screen Sizes available:	24-325
	Quantity:	2 off
<b>3.7 DESANDER</b>	Manufacturer:	Demco
	Model:	4045-1-2-1
	Type:	8" cone desander unit
	No. of Cones:	4 off
	Feed Rate:	584-624 gpm
	Pump Unit:	Warman Type SC, 6 x 4, 50HP, centrifugal pump, electric powered, three phase, 50Hz, 1470 rpm
	Quantity:	1 off
<b>3.8 DESILTER</b>	Manufacturer:	<i>Not available with this rig.</i>
	Model:	
	Type:	
	No. of Cones:	
	Feed Rate:	
	Pump Unit:	
	Quantity:	
<b>3.9 CENTIFUGE</b>	Manufacture:	<i>Not available with this rig.</i>
	Model:	
	Capacity:	

**3.10 DEGASSERS**

**3.10.1 Vacuum Degasser**

*Note: Degasser is available but is not part of normal rig inventory. Installation would be required.*

Manufacturer: *Not available with this rig.*  
 Model:  
 Type:  
 Maximum Flow:  
 Power Unit for Degasser:  
 Power Unit To Vent Gas To Flare Pit:  
 Quantity:

**3.10.2 Poorboy Degasser**

Manufacturer: *Not available with this rig.*  
 Type:  
 Size:  
 Vent Line:  
 Quantity:

**3.11 SHEAR MIXER**

Manufacturer: Geograph-Pioneer  
 Type: Shear mixer  
 Model: Sidewinder Model 400  
 Flow Rate: 400 gpm (approx.)  
 Pump Unit: Warman Type SC, 6 x 4, 50HP, centrifugal pump, electric, three phase, 50Hz, 1470 rpm  
 Quantity: 1 off

**3.12 MUD AGITATORS**

Manufacturer: Reynolds Christian  
 Model: 5/0 480 25  
 Power unit: Three phase 50 Hz, 5.5 hp, 1445 rpm  
 Quantity: 4 off

**3.13 MUD PUMPS**

*Note:-Rig comes with 6-1/2" liners only as standard. Other liners available at cost plus to the Operator*

Manufacture: Continental Emsco  
 Model: D 550  
 Max Input: 550HP @ 65 SPM  
 Input Drive: Chain Compound  
 Max Pressure: 2915 psi with 4-3/4" Liners  
 2090 psi with 5-1/2" Liners  
 1449 psi with 6-1/2" Liners  
 1067 psi with 7-1/2" Liners  
 Gallons per minute - maximum  
 Quantity: 525 gpm @ 65 spm with 6-1/2" Liners  
 2 off

**3.13.1 Pulsation Dampeners**

Manufacturer: Hydril  
 Model: K-20-3000  
 Maximum Pressure Rating: 3,000 psi  
 Quantity: 1 off per pump

**3.13.2 Pressure Relief Valves**

Manufacturer: Oteco  
 Model: PRV-30525 Shear Relief  
 Pressure Settings: 500 psi to 2500 psi  
 Quantity: 1 off per pump

**3.13.3 Drive Motors**

Manufacturer: Caterpillar  
 Model: 3406 B  
 Rating: 360 hp / 268 kW @ 1800 rpm  
 Quantity: 2 off per pump

**3.14 CELLAR PUMP**

Manufacturer: Wilden  
 Model: P15  
 Rating: 240 gpm, 3/8" max dia. solids  
 Displacement - Solids: *Not applicable*  
 Displacement - Slurries:  
 Power Unit: Pneumatically operated  
 Speed Rating: *Not applicable*  
 Quantity: 1 off

**3.15 RISER & FLOWLINE**

Riser Diameter: 30", 24", 22", 13-5/8" diameter  
 Connected to the Conductor Pipe Via: Welded or flanged  
 Quantity: 1 off each

		Flowline Diameter:	10" diameter
		Connected Via:	Hopper
		Quantity:	1 off
<b>3.16</b>	<b>RIG WATER TANK</b>	Total Drill Water Capacity:	150 barrels
		Quantity:	1 off
<b>4</b>	<b><u>ROTATING EQUIPMENT</u></b>		
<b>4.1</b>	<b>SWIVEL</b>	Manufacturer:	GEFCO
		Model:	King Oil Tools 10MB
		Lower Connection:	4½" EU-8 Pin - 6" API Reg LH Pin Sub
		Static Capacity:	240,000 lbs
		Rotating Capacity @ 100 rpm API	156,000 lbs
		Working pressure limit:	4,500 psi
		Quantity:	1 off
<b>4.2</b>	<b>TOP DRIVE</b>	Manufacture:	<i>Not applicable on this rig.</i>
		Model:	
		Rated Capacity:	
		Maximum Torque:	
		Maximum Speed:	
		Power Unit:	
		Quantity:	
<b>4.3</b>	<b>KELLY</b>	Manufacturer:	JSC – Drill Collars & Kelly Plant: Sumy, Ukraine.
		Size:	4¼"
		Bore:	2¼"
		Type::	Hexagonal
		Overall Length:	37 ft
		Working Length:	34ft
		Connection, Box:	6" API Reg LH
		Connection, Pin:	NC 40 RH
		Quantity:	1 off
<b>4.4</b>	<b>KELLY DRIVE BUSHING</b>	Manufacturer:	Dencon
		Model:	27 HDP
		Type:	Pin drive
		Rollers:	To suit :3½", 4¼", 5¼" Hex Kelly
		Quantity:	1 off
<b>4.5</b>	<b>ROTARY TABLE</b>	Manufacturer:	Mid Continent
		Model:	S-27½"-B
		Opening:	27½"
		Drive:	Hydraulic 2 x SAI variable speed motors
		Torque:	0-15,000 ft.lb
		Static Capacity:	1,000,000 lbs
		Rotating Load	500,000 lbs @100 rpm
		Max. speed:	200 rpm
		API Bowls:	Bowl No.'s 1, 2 & 3
		Quantity:	1 off
<b>4.5.1</b>	<b>HPU</b>	Manufacturer:	Sauer Sundstrand
		Model:	Series 90 PV 250
		Drive:	Caterpillar D3406, 200 HP
<b>4.6</b>	<b>KELLY SPINNER:</b>	Manufacturer:	Gill
		Model:	100
		Power Unit:	Hydraulic, Pneumatically signaled
		Quantity:	1 off

**5 WELL CONTROL EQUIPMENT**

**5.1 BLOWOUT PREVENTERS**

<b>5.1.1 Annular</b>	Manufacturer: Model: Size: Work Pressure: Quantity:	Shaffer Spherical, studed top, flanged bottom 21-1/4" 2,000 psi 1 off
<b>5.1.2 Annular</b>	Manufacturer: Model: Size: Work Pressure: Quantity:	Hydril GK, studed top, flanged bottom 13-5/8" 3,000 psi 1 off
<b>5.1.3 Double Gates</b>	Manufacturer: Model: Size: Work Pressure: Quantity: Ram Blocks:	Cameron Type U Double Gate, flanged top and bottom 13-5/8" 5,000 psi 1 off 1 set 2-7/8", 3-1/2", 5", 7", 9-5/8" pipe/casing 1 set blind
<b>5.1.4 BOP Handling System</b>	Manufacturer: Type:	RG Petro Machinery Manual overhead chain hoist & trolleys on twin monorails.
<b>5.1.5 Drilling Spool</b>	Drilling Spools:	1 off Flanged spool, 26" high 21-1/4" 2000 psi x 21-1/4" 2000 psi, 630psi WP 2-1/16" x 5,000 psi & 3-1/8" x 5,000 psi outlets  1 off Flanged spool, 24" high 13-5/8" 3,000 psi x 13-5/8" 3,000 psi 2-1/16" x 5,000 psi & 3-1/8" x 5,000 psi outlets
<b>5.1.6 Spacer Spool</b>	Spacer Spool	1 off Flanged Spool, 15" high 21-1/4" 2,000 psi x 21-1/4" 2,000 psi
<b>5.1.7 DSA's</b>	Double Studed Adaptors:	1 off 13-5/8" 3,000psi x 13-5/8" 5,000psi 1 off 11" 3,000psi x 13-5/8" 3,000psi
<b>5.1.8 Valves on the BOP's</b>	Kill Line Valves:  Choke Line Valves:	2 off 2-1/16" 5,000 psi manual gate valve, flanged  1 off 3-1/8" 5,000 psi manual gate valve, flanged 1 off 3-1/8" 5,000 psi HCR valve, flanged
<b>5.2 ACCUMULATOR</b>	Manufacturer: Model: Bottles: Manifold Quantity: Bank isolation: Relief Valves: Reservoir Capacity: Functions: Triplex Pump: Air Pumps: Working Pressure: Annular Pressure regulator: Manifold Regulator: Safety Alarms: Drillers Remote Control:	Koomey T15 110 3S 18 x 11 gallon, bottom loading 2 banks Manually operated gate valves 1 accumulator pressure relief valve 280 Gallons 4 x 1" selectors plus 1 x 1" spare selector 1 unit, 3/4" Plungers 2 units, 6" air end x 50:1 ratio 3,000 psi 1" Type TR manually operated 1" Type TR manually operated Nil Koomey Model GBK5A control station on the rig floor, operates annular, pipe & blind rams, HCR, annular manifold pressure, bypass valve, & spare.
<b>5.3 CHOKE MANIFOLD</b>	Size: Number of Valves:	Not available with this rig.

5.3.1	<b>Super Choke</b>	Manufacture: Type: Size: Remote Operating Panel: Quantity:	<i>Not available with this rig.</i>
5.3.2	<b>Manual Choke</b>	Manufacture: Model: Type: Quantity:	<i>Not available with this rig.</i>
5.4	<b>SAFETY VALVES</b>		
5.4.1	<b>Upper Kelly Cock</b>	Manufacturer: Connection, Box: Connection, Pin: WP(psi): Quantity:	M & M 6-5/8" LH Reg 6-5/8" LH Reg 10,000 psi 1 off
5.4.2	<b>Lower Kelly Cock</b>	Manufacturer: Connection, Box: Connection, Pin: WP: Quantity:	M & M NC 40 NC 40 10,000 psi 1 off
5.4.3	<b>Stab-In safety valve (full opening)</b>	Manufacturer: Connection, Box: Connection, Pin: WP: Quantity:	M & M 3-1/2" IF (NC 38) 3-1/2" IF (NC 38) 5,000 psi 1 off
5.4.4	<b>Inside BOP</b>		<i>Available on request at cost plus to the Operator</i>
5.4.5	<b>Pump-In Sub</b>		<i>Available on request at cost plus to the Operator</i>
6	<b><u>POWER SYSTEM</u></b>		
6.1	<b>ENGINES</b>	Manufacturer: Model: Prime Rating: Quantity:	Detroit 8V92 TA turbo diesel 450 HP 2 off
6.2	<b>GENERATORS</b>	Manufacturer: Model: Rating: Quantity:	Stanford C5354D 380 kVA 2 off
6.3	<b>SWITCHBOARD</b>	Manufacturer: System Voltage: Interrupting Rating: System Frequency: Quantity:	Jackson Electrical Ind 460 Vac / 240Vac 35kA @ AC460V 50 Hertz 1 off
6.4	<b>SCR UNIT</b>	Manufacture: Model: No. of Independent Modules:	<i>Not available with this rig</i>



**6.5 AIR SYSTEM**

**6.5.1 Compressor No.1**                      Manufacturer: Atlas Copco  
 Model: GA30P  
 Type: Rotary screw air compressor  
 Pressure: 100 psi  
 Rating: 203 cfm @ 100 psi  
 Power: Three phase, 30 kW  
 Quantity: 1 off

**6.5.2 Compressor No.2**                      Manufacturer: Atlas Copco  
 Model: BT4  
 Type: Piston air compressor  
 Pressure: 125 psi  
 Rating: 120 cfm @ 125 psi  
 Power: GM 5034-7001, 65HP diesel  
 Quantity: 1 off

**6.6 FUEL TANKS**                              Total Diesel Capacity: 14,000 litres

**6.6.1 Stationary Tanks**                      Tank Capacity: 7,000 litres  
 Type: Containerised, internal bund.  
 Quantity: 2 off

**7 PIPE & HANDLING EQUIPMENT**
**7.1 TUBULARS**

**7.1.1 Drillpipe**                                  Size: 3-1/2"  
 Grade: G-105  
 Class: Premium  
 Weight: 15.5 ppf  
 Footage: 6,500 ft or 2,000 mtrs (220 joints)  
 Connection: NC38 (3-1/2" IF)  
 Tool Joint: 5" OD  
 Hard Banded: Yes (Arnco 100XT)  
 Internal Plastic Coating: No

**7.1.2 Drillpipe**                                  Size: 5"  
 Grade: G-105  
 Class: Class 2  
 Weight: 19.5 ppf  
 Footage: 5,000 ft or 1,500 mtrs (165 joints)  
 Connection: NC50 (4-1/2" IF)  
 Tool Joint: 6-1/2" OD  
 Hard Banded: Yes (Arnco 100XT)  
 Internal Plastic Coating: No

**7.1.3 Heavy-Weight Drillpipe**              Size: 3-1/2"  
 Connection: NC38 (3-1/2" IF)  
 Weight: 25.3 ppf  
 Quantity: 17 off

**7.1.4 Heavy-Weight Drillpipe**              Size: 5"  
 Connection: NC50 (4-1/2" IF)  
 Weight: 48.5 ppf  
 Quantity: 8 off

**7.1.5 Drill Collars**                              Size: 4-3/4" x 2-1/4" ID  
 Connection: NC38 (3-1/2" IF)  
 Weight: 46.7 ppf  
 Type: Spiral  
 Quantity: 20 off

**7.1.6 Drill Collars**                              Size: 6-1/4" x 2-13/16" ID  
 Connection: NC46 (4" IF)  
 Weight: 82.3 ppf  
 Type: Plain & Spiral  
 Quantity: 20 off

**7.1.7 Drill Collars**  
 Size: 8-1/4" x 3" ID  
 Connection: 6-5/8" Reg.  
 Weight: 147 ppf  
 Type: Spiral  
 Quantity: 8 off

**7.1.8 Pup Joints**  
 Size: 3-1/2"  
 Connection: NC38 (3-1/2" IF)  
 Length: 5 ft, 10 ft  
 Quantity: 2 off each

7.2	SUBS	Sub Description	Top Connection	Bottom Connection
		Kelly Saver Sub	BOX NC40	PIN NC50 (4-1/2" IF)
		Kelly Saver Sub	BOX NC40	PIN NC50 (4-1/2" IF)
		Kelly Saver Sub	BOX NC40	PIN NC38 (3-1/2" IF)
		Kelly Saver Sub	BOX NC40	PIN NC38 (3-1/2" IF)
		Cross Over Sub	BOX NC50 (4-1/2" IF)	PIN 6-5/8" Reg
		Cross Over Sub	BOX NC46 (4" IF)	PIN 6-5/8" Reg
		Cross Over Sub	BOX NC50 (4-1/2" IF)	PIN NC46 (4" IF)
		Cross Over Sub	BOX NC38 (3-1/2" IF)	PIN NC46 (4" IF)
		Bit Sub (recessed for a 5F-6R float)	BOX 6-5/8" Reg	BOX 6-5/8" Reg
		Bit Sub (recessed for a 4R float)	BOX NC 46 (4" IF)	BOX 4-1/2" Reg
		Bit Sub (recessed for a 2F-3R float)	BOX NC 38 (3-1/2" IF)	BOX 3-1/2" Reg

**7.3 CUP TESTERS**  
 Manufacturer: Cameron  
 Model: Type "F"  
 Connection, Box: NC 50 (4-1/2" IF)  
 Connection, Pin: NC 50 (4-1/2" IF)  
 Casing Size: 9-5/8", 43.5-53.5 ppf  
 13-3/8", 48 to 61 ppf  
 Total Load Capacity: 800,000 lbs  
 Quantity: 1 off

**7.4 FISHING TOOLS**  
 1 x Bowen 5-3/4" Series 150 Overshot, Assy No 8975 (3-1/2", 4-3/4", plus)  
 1 x Bowen 8-1/8" Series 150 Overshot, Assy No C-5342 (5", 6-1/4", 6-1/2", plus) (DS)  
 1 x Bowen 10-5/8" Series 150 Overshot, Assy No C-5312 (8") (DS)  
 1 x 6" OD reverse circulating junk basket  
 1 x 5" Fishing magnet

**7.5 LIFTING NUBBINS**

**7.5.1 6-1/4" Drill collars**  
 Type: Lifting subs  
 Size DP: 3-1/2"  
 Connection: NC46 (4" IF)  
 Qty: 10 off

**7.5.2 8-1/4" Drill collars**  
 Type: Lifting subs  
 Size DP: 3-1/2"  
 Connection: 6-5/8" Reg  
 Qty: 3 off

**7.6 ELEVATORS**

**7.6.1 Drillpipe elevators**  
 Manufacturer: Access Oil Tools  
 Size: 3-1/2"  
 Capacity: 150 ton  
 Quantity: 2 off

**7.6.2 Drillpipe elevators**  
 Manufacturer: Access Oil Tools (DS)  
 Size: 5"  
 Capacity: 250 ton  
 Quantity: 1 off

7.6.3 Drill collar elevators	Manufacturer: Size:	<i>Not applicable on this rig Rig uses Drillpipe elevators with 3-1/2" lifting subs</i>
7.6.4 Casing elevators	Manufacturer: Size: Capacity: Quantity:	Varco 7" 150 ton 1 off
7.6.5 Casing elevators	Manufacturer: Size: Capacity: Quantity:	BJ (DS) 9-5/8" 150 ton 1 off
7.6.6 Casing elevators	Manufacturer: Size: Capacity: Quantity:	Access Oil Tools 13-3/8" 150 ton 1 off
7.6.7 Casing elevators	Manufacturer: Size: Capacity: Quantity:	Varco 18-5/8" 150 ton 1 off
7.6.8 Single joint pick-up elevators	Manufacturer: Size: Capacity: Quantity:	BJ (DS) 9-5/8" 3 ton 1 off
7.6.9 Single joint pick-up elevators	Manufacturer: Size: Capacity: Quantity:	Dencon 13-3/8" 4.5 ton 1 off
7.6.10 Single joint pick-up elevators	Manufacturer: Size: Capacity: Quantity:	AOT 18-5/8" 4.5 ton 1 off

7.7 SLIPS

7.7.1	<b>Drill pipe slips</b>	Manufacturer: Size: Quantity:	Dencon 3-1/2" 1 off
7.7.2	<b>Drill pipe slips</b>	Manufacturer: Size: Quantity:	Varco (DS) 5" 1 off
7.7.3	<b>Drill collar slips</b>	Manufacturer: Size: Quantity:	Access Oil Tools 4-3/4" 1 off
7.7.4	<b>Drill collar slips</b>	Manufacturer: Size: Quantity:	Varco 6-1/4" 1 off
7.7.5	<b>Drill collars slips</b>	Manufacturer: Size: Quantity:	Varco 8" 1 off
7.7.6	<b>Casing slips</b>	Manufacturer: Size: Quantity:	Varco 7" 1 off
7.7.7	<b>Casing slips</b>	Manufacturer: Size: Quantity:	Access Oil Tools 9-5/8" 1 off
7.7.8	<b>Casing slips</b>	Manufacturer: Size: Quantity:	Access Oil Tools 13-3/8" 1 off
7.8	<b>Casing slips</b>	Manufacturer: Size: Quantity:	Varco 18-5/8" 1 off
7.9	<b>SAFETY CLAMP</b>	Manufacture: Model: Size: Quantity:	Baasch Ross Type C 4-1/2" to 8-1/4" 2 off
7.10	<b>PIPE SPINNER:</b>	Manufacturer: Model: Pipe Range: Power Unit: Quantity:	Weatherford Mini Spinner, Model 169 2-3/8" to 5-1/2" Hydraulic powered 1 off
7.11	<b>MANUAL TONGS</b>	Manufacturer: Type: Length of Tong: Lug Jaws Available: <u>Torque Ratings:</u> 3-1/2" to 11-1/4" 11-1/4" to 14-3/8" Quantity:	Access Oil Tools HT65 – standard lever 3.9 ft 3-1/2" to 14-3/8" 65,000 ft / lbs 40,000 ft / lbs 1 set (Make-up tong & Break-out tong)
7.12	<b>CASING TONG</b>	Manufacturer: Model: Torque Range, 2,000 psi, High Gear: Torque Range, 2,000 psi, Low Gear: Casing Range: Casing Jaws Supplied with Tong: Power Unit: Qty:	Weatherford Model 16 3,750 ft/lbs 15,400 ft/lbs 2-3/8" to 13-3/8" 5-1/2", 7", 9-5/8" & 13-3/8" Powered off Rig hydraulic power unit 1 off
7.13	<b>WIRELINE UNIT</b>	Manufacturer: Model:	<i>Not available with this rig.</i>

Power Supply:  
Feet:  
Wire:  
Quantity:

**8 MISCELLANEOUS**

**8.1 CASING PROTECTORS**

	<u>Casing size</u>	<u>Type</u>	<u>Quantity</u>
8.1.1	9-5/8"	Klampon	2 off
8.1.2	7"	Klampon	2 off

**8.2 CASING DRIFTS**

	<u>Casing size</u>	<u>Casing weight</u>	<u>Quantity</u>
8.2.1	18-5/8"	87.5 ppf	1 off
8.2.2	13-3/8"	68 ppf	1 off
8.2.3	9-5/8"	47 ppf, 43.5 ppf	2 off
8.2.4	7"	29 ppf	1 off

**8.3 WATER SUPPLY**

Manufacturer:  
Model:  
Type:  
Maximum Head:  
Maximum Discharge:  
Power unit:  
Quantity:

*Available on request at cost plus to the Operator*

**8.4 RIG LIGHTING**

Manufacturer:  
Location:  
  
Hazardous Area Requirements:

Snellson & Hubbel  
Rig lightening system as required to give adequate lightening to all work areas including the derrick  
All lighting on the rig is explosion proof.  
Lighting on the fringes of the location, i.e. smoko shack may be general purpose spot lights

**8.4.1 Emergency lighting**

Emergency Back-Up Lightening

Emergency lights installed at dog hut, Kooomey, desander, mud transfer pump, gen shed, and mud mixing pump.

**8.5 RIG COMMUNICATIONS**

**8.5.1 External Communication**

Internet & e-mail Facilities at the Rig  
Provider:  
Computers:  
Phones – Voice Over IP:  
Phones – Mobile  
Phones - Satellitie  
Fax

Tuaropaki Communications  
2 off  
2 off permanent in the office  
2 off (when in range)  
Nil  
Nil

**8.5.2 Camp**

Provider:  
Computers:  
Phones:  
  
Rig to Camp:

*Not applicable to this rig.*

**8.5.3 Internal Communication**

Rig Communication:  
  
Handheld radios

Nil.  
4 off

**8.6 WELDING EQUIPMENT**

Manufacturer:  
Model:  
Amps:  
Quantity:

Cig Weld  
MPM 8/270 KA1, diesel powered  
270 amp  
1 off welding machine.  
1 set of oxy-acetylene cutting equipment.

**8.7 VEHICLES**

8.7.1	<b>Loader</b>	1 off Kawasaki 80 Z IV Loader or equivalent complete with:- <ul style="list-style-type: none"> <li>• Roll Over protection</li> <li>• Forklift tyres (7 T)</li> <li>• Certified lifting stinger complete with lifting chains</li> <li>• Pipe clamping forks</li> </ul>								
8.7.2	<b>Rig Ute</b>	1 off Utility vehicle								
8.7.3	<b>Crew Van</b>	1 off Crew van (hire equipment)								
8.8	<b>MATTING</b>	1 set wooden matting for Substructure								
8.9	<b>MUD BUCKET</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Manufacture:</td> <td>Katch Kan</td> </tr> <tr> <td>Size:</td> <td>3-1/2" drillpipe</td> </tr> <tr> <td>Quantity:</td> <td>1 off</td> </tr> </table>	Manufacture:	Katch Kan	Size:	3-1/2" drillpipe	Quantity:	1 off		
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8.10	<b>SURVEY EQUIPMENT</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Manufacture:</td> <td><i>Available on request at the cost of the Operator</i></td> </tr> <tr> <td>Compass size:</td> <td></td> </tr> <tr> <td>Quantity:</td> <td></td> </tr> </table>	Manufacture:	<i>Available on request at the cost of the Operator</i>	Compass size:		Quantity:			
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8.11	<b>BUG BLOWER</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Manufacture:</td> <td><i>Available on request at the cost of the Operator</i></td> </tr> <tr> <td>Quantity:</td> <td></td> </tr> </table>	Manufacture:	<i>Available on request at the cost of the Operator</i>	Quantity:					
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8.12	<b>TORQUE WRENCH</b>	Enerpac Hydraulic Torque Wrench, c/w cassettes and drives for 2-3/16" AF, 2-9/16" AF								
8.13	<b>SAFETY EQUIPMENT</b>	2 off BA sets 5 off ELSA sets Fire extinguishers								
8.14	<b>OTHER BUILDINGS AND EQUIPMENT</b>	1 off Mechanic / electrician workshop (attached to day tank) 1 off Tool-house 1 off Spare parts storage, 20 ft container (critical spares) 1 off Catwalk complete with 2 sets of pipe racks (each set 28ft long) 4 off Pipe bins 1 off Dog house 1 off Welders workshop 1 off Lunch Room / Toilet 1 off Site Office 1 off 5,000Ltr water tank to supply water to the above buildings.								
<b>9</b>	<b><u>INSTRUMENTATION</u></b>									
9.1	<b>Geograph.</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Manufacturer:</td> <td>Wagner Instrumentation Inc</td> </tr> <tr> <td>Model:</td> <td>WWDR6114-40</td> </tr> <tr> <td>Capacity:</td> <td>6 pen</td> </tr> <tr> <td>Quantity:</td> <td>1 off</td> </tr> </table>	Manufacturer:	Wagner Instrumentation Inc	Model:	WWDR6114-40	Capacity:	6 pen	Quantity:	1 off
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9.2	<b>Weight Indicator</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Manufacturer:</td> <td>Martin-Decker</td> </tr> <tr> <td>Model:</td> <td>Type FS Weight indicator</td> </tr> <tr> <td>Capacity:</td> <td>0 – 240,000 lbs</td> </tr> <tr> <td>Quantity:</td> <td>1 off</td> </tr> </table>	Manufacturer:	Martin-Decker	Model:	Type FS Weight indicator	Capacity:	0 – 240,000 lbs	Quantity:	1 off
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<b>9.2.1 Deadline Anchor / Load Cell</b>	Manufacturer: Model: Load Cell: Quantity:	National Type F E160A tension type 1 off
<b>9.2.2 Tong Torque System</b>	Manufacturer: Model: Tension Type Load Cell Range: Indicating Gauge:  Quantity:	Totco DCT 0 – 25,000 lbs single line pull Totco DCT25, 6" dial indicator gauge, c/w adjustable target pointer, damper, fluid filled 1 off
<b>9.2.3 Rotary Torque System</b>	Manufacturer: Model: Quantity:	Floyd ( <i>supplied by Bournedrill</i> )  1 off
<b>9.2.4 Drillpipe &amp; Casing Pressure Gauges</b>	Manufacturer: Model: Indicator Gauge:  Quantity:	Martin Decker Type E17-152 c/w diaphragm protector 6" dial indicator gauge, c/w adjustable pointer, damper 1 off
<b>9.2.5 Pump Pressure Gauge</b>	Manufacturer: Model: Type: Indicator Gauge: Quantity:	Cameron  Local 0 – 5000 psi 2 off
<b>9.2.6 Pit Volume Totaliser</b>	Manufacturer: Model: Type: Indicator Gauge: Quantity:	<i>Available by negotiation.</i>

**10 ACCOMMODATION**

**10.1 Accommodation:** *Available on request at the cost of the Operator*