

Rig 2 Drilling Equipment Specifications

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| DRAWWORKS: | Mac Model-400 (500 Hp) Single Drum Drawworks S/N 5-20-81. Lebus 1-1/8" Main Drum Grooving. Hydraulic Makeup and Breakout Catheads fitted with Tong Line Torque Gauge. Parmac 22" Single Rotor Hydromatic Brake 2 Engine Compound & Drillers Console, Master skidded. Powered by 2 x Skid/Floor Mounted Caterpillar Model 3406-TA air start diesel engines, F-11524-TC1 Twin Disc Torque Converters with Airflex 16-CB-500 Clutches. Motor Rating: 275 Hp at 1800 rpm each. Engine s/n 90U14147 & 90U14162 |
| RIG CAPACITY: | Drilling Depth 2,500mtr with 4-1/2" Drill Pipe |
| SUBSTRUCTURE: | Box type, (G.L. to K.B. 14.00ft,) 11' High (below rotary) x 18' Wide x 40 Foot Long, fitted with all necessary Mudline manifold (4"), 36" folding walkways, stairways, hand rails and Drillers House (Dog house) |
| DERRICK: | Al Hicks Model AH-100. Ground Height 100', Pen Type Cantilever Mast, 14 feet 9-3/4" leg Span. Maximum static hook load 300,000 lb with 8 lines |
| CROWN BLOCK: | Al Hicks Model AHC-300, 5 x 1-1/8" Sheaves including fast line and dead line sheaves. |
| CROWN-O-MATIC: | Koomey Mdl-TCB Crown Block Safety Device. |
| FLOOR WINCH | Ingersol Rand HU Series Air Winch |
| TRAVELING BLOCK: | Sowa Model S-150-4, 150 Ton, 4 x 1-1/8" Sheave Unitized Block and Hook. |
| ROTARY SWIVEL | Tri-Service Machine Model TSM-150 Swivel 150 ton Rating @ 100 RPM |
| ROTARY TABLE: | Oilwell Mdl-175, (17-1/2"), oil bathe, c/w Varco "MSS" split Master Bushings. |

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| MUD PUMP: | <p>No.1</p> <p>1 only Tri Service Machine TSM-500 (7-1/2" x 16") Duplex Mud Pump, Api-7, S/N 149, Forged Steel fluid End, Quick Change Cylinder Heads, Oteco 2" SRV, Oteco model 7 pressure gauge, Belt Driven by Caterpillar D-353-E Diesel Engine, HydriL K-10 x 3000 Pulsation dampener, Twin Disc PTO all on an Oilfield Skid. Engine Serial # 46B09555 Arr # 7N3199</p> |
| MUD PUMP: | <p>No.2</p> <p>1 x Continental Emsco DB-550 (550 HP) (7-1/2x 16") Duplex Mud Pump, Api-8, S/N 262, Oteco 2" SRV, Belt driven By Caterpillar D-353-E Diesel Engine, Continental Emsco 3000lb Pulsation Dampner, Twin Disc PTO, Oilfield Skid Mounted. Engine Serial # 46B05099 Arr # 8L3921</p> |
| MUD PUMP: | <p>No. 3</p> <p>To be identified and deliverable in 24 hrs to location or sufficient fluid ends and power ends to repair either mud pump on location within 24 hrs</p> |
| STANDPIPE: | <p>Standpipe Manifold - 4" x 5000 Lb</p> <p>Fitted with Demco 4" Gate Valve</p> <p>1 only 3-1/2" ID x 55 ft x 4000/8000 psi Kelly Hose.</p> |
| MUD SYSTEM: | <p>2 x 300 Barrel Tanks incorporating 80 bbl pill tank and 40 bbl Trip tank.</p> |
| SHAKER: | <p>2 X D.F.E Linear motion SCR-01 Single three screen shakers.</p> |
| AGITATOR: | <p>Lightning 72Q7.5 Mixer c/w 25hp Exp Motor</p> |
| DEGASSER: | <p>48" Mud Gas Separator Vertical Skid Mounted</p> |
| DESILTER: | <p>Harrisburg Mdl 600-12 (600 GPM)</p> <p>12 x 4" Cone Assy, with Mission 6 x 8 centrifugal Pump driven by 50 Hp Electric Motor.</p> |
| DESANDER: | <p>Demco Model 122. 2 x 12" Cones with 6 x 8 Centrifugal Pump driven by 50 Hp Electric Motor.</p> |
| MUD MIXING: | <p>Demco Style Hopper charged by 6 x 8 Centrifugal pump driven by 50 Hp Electric Motor.</p> |
| BLOWOUT PREVENTORS: | <p>Ram BOP:</p> <p>1 only Shaffer Double Gate 13-5/8" x 3000 Type "B" complete with CSO, 2-3/8, 2-7/8, 3-1/2, 4-1/2" and 7" ram assy.</p> <p>Annular BOP:</p> <p>1 only 13-5/8" x 3000 HydriL "GK" Studded Top Flanged Bottom.</p> |

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| ACCUMULATOR: | Ross Hill G-180-E-20-2-AG (8 station) 180 gallon Accumulator with 1 x Triplex pump c/w 20hp 60HZ Electric motor fitted with 2 only Haskel GW35 56:1 ratio backup Air Pumps c/w remote Drillers console skid mounted. |
| CHOKE MANIFOLD: | 1 x Cameron Skid Mounted Manifold Consisting of: : 7 x 2-1/16" x 3000 Cameron Gate Valves : 2 x CPI 2-1/16" x 5000 Adjustable Chokes. : 1 2-1/16 x 3 M x 5M Tees/Crossovers and manifolding. |
| KILL LINE: | 2 x 3-1/8 x 3000 Cameron manual valves. Continental Emsco XHP series 2" 15000 WP swivel lines HCR |
| INSTRUMENTATION: | Martin Decker 7 Pen Record-O-Graph. Martin Decker "Clipper" Weight Type Indicator. Martin Decker GM-6 Series Mud pressure System. Martin Decker Pump Stroke Indicators. Totco TS Rotary Tong Torque System. |
| MUD MONITORING: | AOI-300 Series Flow Indicator System AOI Digital Read Out Stroke Counter AOI-1000 Series Pneumatic Mud Monitoring System |
| SURVEY UNIT: | Totco Operating Unit No. 6 (P/N ABA8AT5N9) Double recorder 0-8 degree. Go-devil series 1-5/8" OD x 1-1/4" ID. |
| PIPE SPINNER: | Varco SSW10 Pneumatic |
| KELLY SPINNER: | Foster Model 77 Pneumatic |
| KELLY: | 1 x 4 1/4" Square x 40 ft Kelly with 6-5/8" Reg LH Box up and 4" FH Pin Down. |
| UPPER KELLY VALVE: | M&M Upper Kelly Cock 6-5/8" Reg LH Pin/Box Connection 10,000 psi test. |
| LOWER KELLY VALVE: | M and M. 4-1/4" x 10000 (4"IF Pin/Box) Canister type Lower Kelly Cock. |
| STABBING VALVE: | Gray 63021 (4" IF) c/w rod and deflector. |
| KELLY DRIVE | Varco 4-1/4" HDS |

BUSHING:

DRILLPIPE:

Sufficient 4-1/2" Grade 'E' & 'G' 16.6 lbs/ft Range

Drill pipe with 4" if pin/box connections.

Sufficient 3 1/2" Drillpipe to reach 3000 meters on standby if needed

6 each 4-1/2" HWDP

DRILL COLLARS:

3 each 8" OD Spiral x 2-13/16 x 29 ft

1 each 8" OD Spiral (6 ft) Pony Joint.

26 each 6 1/4" OD Spiral & Slick x 2 13/16 ID x 30 Ft

Slip recess only, with 4" IF pin/Box connections.

FISHING TOOLS:

As required to fish Contractor's String

HANDLING TOOLS:

Elevators:

1 set 4-1/2" Drillpipe (18 deg)

1 set 7" Casing Single Jt

1 set 9-5/8" Casing Single Jt

1 set 7" Casing Side Door

1 set 9-5/8" Casing Side Door

1 set 3-1/2" Drillpipe (18 deg)

1 set 13-3/8" Casing Side Door

1 set 2-3/8" Tubing

1 set 2-7/8" Tubing

Slips:

2 sets 3-1/2" Drillpipe

1 set 4-1/2" Drillpipe

2 sets 6-1/2" Drill Collar

1 set 7" Casing

1 set 9-5/8" Casing

1 set 13-3/8" Casing.

Safety Clamp

1 x Bass Ross Type "C" drill collar Dog Clamp

1 x Varco MP-R Safety Clamp

Main Floor Rotary Tongs

1 set (2) BJ Type "B" Rotary Pipe Tongs.

Range: 2-3/8" to 13-3/8"

1 only Weatherford Model 16K Hydraulic Casing Tong c/w 5-1/2", 7", 9-5/8", 13-3/8" Jaws & Deutz 6cyl Hydraulic Power Pack

1 Hillman Kelly 3700H Hydraulic Tubing Tong c/w 2-3/8", 2-7/8" & 3-1/2" Jaws

Chain Tongs

1 set (2) 9-5/8" Casing Chain Tongs.

SUBS:

Bit Subs

1 only 6-5/8" Reg Box with float bore x 6-5/8" Reg Box

3 only 4-1/2" Reg Box with float bore x 4" IF Box

1 only 3-1/2" Reg Box with float bore x 3-1/2" IF Box

1 only 7-5/8" Reg Box x 6-5/8" Reg Box

Pick Up Subs

2 only 6-5/8" Reg

10 only 4" IF

6 only 3-1/2" IF

X-over Subs

6-5/8" Reg Pin x 4" IF Box Bottle Neck

2 only 4" IF Pin x 3-1/2" IF Box

Saver Subs

3-1/2" IF Pin x 4" IF Box (6-3/8"OD)

3-1/2" IF Pin x 3-1/2" IF Box

4" IF Pin x 4" IF Box

CASING/TUBING

DRIFTS:

9 5/8" Casing drift

7" Casing drift

CUP TESTER:

9 5/8" Cameron Casing Cup Type

WIRELINE UNIT:

HE-V-20-10-HP Hydraulic Wireline Unit

Capacity : (0.92 x 10,000 ft)

WELDING EQUIPMENT

1 x Lincoln AS-400-50 Diesel Powered Electric Welder.

AIR COMPRESSORS:

1 only Elgi model 5515 Compressor.

1 only Compare 6050 Rotary screw compressor

1 only Ingersol Rand Series 3000 Compressor Serial # 0007384 Powered by Siemens 25HP 60HZ Electric Motor

1 only John Wood Co 200psi air receiver Serial # 500803-71

AC GENERATORS: 2 only Caterpillar SR4 alternator Powered by Cat-3406PC 256 KVA

FUEL TANKS: 250 Gallon day tank
2 only Ebara model 120/07 50HZ IP55 Fuel pumps

WATER TANKS: 200 bbl

PIPE RACKS: 3 sets 42" High x 28Ft Long Triangle style pipe racks.

PIPE BINS: 3 skid mounted bins.

CATWALKS: 2 x 22' (45' overall length)

MUD LAB: Bariod No. 821 Mud Laboratory Kit

MUD SAVER: 1 only Katch Kan single man

RAT HOLE DIGGER: 1 x Tri Service Machine Model-RHD
Chain/Sprocket driven (1-1/4" Single)

CELLAR PUMP: Cellar Jet

WATER PUMP: 2 x 3" portable water pumps with 3" Suction and lay-flat to suit.

MECHANIC SHOP: Oilfield skid mounted workshop / Compressor house containing drill press, hand and power tools.

PRESSURE CLEANER: Spitwater Model 201

RIG PARTS STORE 40ft Pantec trailer c/w shelving and dedicated rig spare parts storage along with 10ft fridge box for rubber storage

PAYLOADER: Caterpillar 966C rubber tyred loader Rated @ 8 tonne Equipped with 7' tynes & 4 m3 bucket. Serial # 78G2032M Arr # 3Y2908

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| RIG VEHICLES: | 1 x Toyota HJ-75 Station Wagon (Crew) 1 x Toyota HJ-75 (1- ton) pick-up UTE. |
| RIG ACCOMMODATION: | <u>Toolpusher Accommodation -</u> 1 x Transportable unit 40' x 9' x 9' c/w Sleeping quarters - Ablution facilities & two separate offices. <u>Drilling Supervisors Accommodation -</u> 1 x Transportable unit 40' x 9' x 9' c/w Sleeping quarters - Ablution facilities & two separate offices. |
| FIRE EXTINGUISHER: | 12 Certified Units located in strategic positions in and around the Rig and Camp. |
| COMMUNICATIONS: | 1 only V-SAT system for phone and internet communications |
| CAMP GENERATOR: | 1 only Camp Generator House (fully sound proofed) (12.0 x 3.0m Skid Mounted) c/w 14,000litre capacity water tank -Davey Water Pump 2 only Onan Generator sets 100KVA Fuel tank capacity 7000lts |
| SLEEPING UNITS: | 1 only (14.4 x 3.0m skid mounted) 6 person Bunkhouse c/w Built in wardrobes, table, beds and bedding. 2 only (14.4 x 3.0m skid mounted) 10 person Bunkhouse c/w Built in wardrobes, table, beds and bedding. |
| KITCHEN-DINING: | 1 only Kitchen/Diner/Coolroom/Freezer Unit (14.4 x 3.0m skid mounted) Built-in combined freezer/chiller unit c/w Commercial Kitchen, Range/Oven, Microwave, Deep fryer, Mixer/Blender, Bain Marie, fixed tables, chairs and all necessary utensils. |
| RECREATION: | 1 x Recreation Room / Clinic Unit (14.4 x 3.0m Skid Mounted) c/w television, video & lounge chairs 1 x First Aid Room |
| ABLUTION: | 1 x Ablution / Laundry / Store Unit (14.0 x 3.0m Skid Mounted) c/w 315litre hot water unit, 4 x toilet bays and 5 shower bays. Laundry c/w 2 x washing machines & 2 x dryers Storage area with built in shelving |
| SPARES: | Minimums as identified in Schedule L; locations of spares to be agreed prior to start of operations |