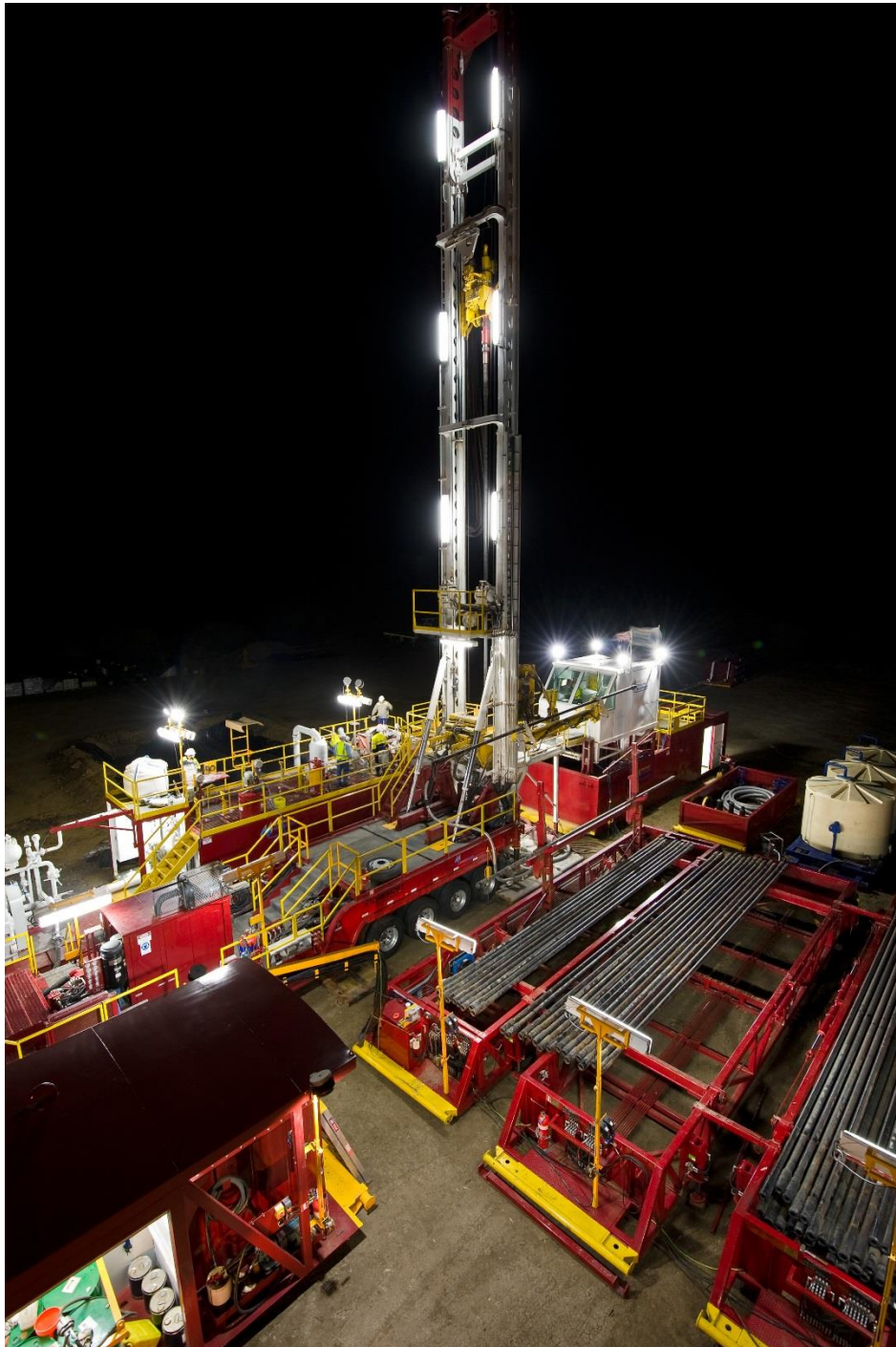


ENERGY DRILLING AUSTRALIA

Rig 1

Foremost Explorer III-65



ENERGY DRILLING AUSTRALIA – Rig 1

Foremost Explorer III-65

RIG EQUIPMENT LIST

Component	Description
Drilling Rig	<p>The Foremost Explorer III-65 is a trailer mounted, single Shallow Drilling Rig consisting of a mast with integral work floor, top drive, automated pipe handler, BOP handler, Iron Roughneck and power slips all powered by a centralized hydraulic system. All drilling functions are controlled via the remote control console that is designed for mounting at a remote location.</p> <ul style="list-style-type: none"> • Mast, structurally fabricated, one piece hydraulically raised and designed for Range III pipe. Mast is rated for 130,000 lbs hook-load and designed in accordance with API 4F recommend practices. Mast incorporates an integral work floor. • Optional slant mast – mast is capable of being operated at up to 15° off vertical. Mast angle is infinitely adjustable from vertical to 15° and locked into position with threaded adjustable turnbuckles. At angles greater than 5° the pullback capacity is reduced to 80,000 lbs. • Detroit Series 60 deck engine rated for 475 BHP @ 2100 RPM, electronically controlled diesel engine with cooling system, fuel tank, and complete electrical system. • Trailer mounted control panel for operation of mast raising and trailer levelling systems. • Hydraulic power unit complete with tank, filters, relief valves and oil cooler. Hydraulic out riggers front, mid trailer and rear for levelling of rig. • F-100T-20 Foremost Hydraulic Top Drive. Top drive uses hydraulic cylinders as its feed system. No draw works is required. • Foremost Series 4,000 Hydraulic Pipe Handler for Range III pipe, drill collars and casing. • BOP handler/carrier to handle BOP. • Two (2) general work winches and one (1) survey winch. • One (1) Sub-floor working winch
Substructure	<p>The trailer is a high yield steel construction dual drop 50 ton, quad axle trailer with air spring suspension and the following features;</p> <ul style="list-style-type: none"> • Tires (16): 11RR 22.5 Michelin XZY3 Load range H • Front Outriggers: Two (2) 5” bore x 4.5”rod x 36” stroke (18” ground penetration) hydraulically locked. Single full width x 18” steel Pontoon. • Mid-ship Outriggers: Two (2) 5” bore x 4.5” rod x 36” stroke (21” ground penetration) hydraulically locked. Single full width x 18” steel Pontoon • Rear Outriggers: Two (2) 6” bore x 5” rod x 48” stroke (30.25” ground penetration). Two (2) 46” x 16” aluminum pontoons with ball socket. Hydraulically locked with secondary mechanical split wing lock nut. • Decking and Handrails: Decking and handrails as required by Australian standards. Some handrails are removable for transport or service requirements. • Stairs: Qty 2 - fold down aluminum stairs with handrails – one on either side of trailer to provide access to trailer deck from the ground. Qty 1 – fixed steel stairway with handrail leading from trailer deck to work floor. • The front gooseneck is sufficient in length to accommodate a typical tandem axle dolly. • All outriggers are lowered onto wood and steel constructed mats to improve stability.

Component	Description
Hydraulic Pull Back / Pull Down System	Foremost top drive hoist feed system consisting of: <ul style="list-style-type: none"> • Two (2) hydraulic cylinders and heavy-duty cable system which provide all pull back and pull down forces. • Rails on either side of mast provide a track in which the top drive travels. • Hydraulic cylinders are connected directly to base of mast. All pull up loads are transferred directly to the base of mast producing no crown load. • Pull back forces infinitely variable 0-130,000lbs • Pull down forces infinitely variable 0-25,000lbs • Feed rate down 0-150 feet per minute. (theoretical) • Fast feed rate up 0-150 feet per minute.(theoretical) • Cylinders: Two (2) 7" bore x 5.475" rod x 330" stroke. 3000 psi maximum working pressure, 4000 psi test pressure. 1900 psi maximum pressure at full extension. 2 ½" pins, greaseable with lock straps. • Cables: Pull-back 1½" Cushion Pac 8 with adjusting turn buckles. Pull-down 9/16" Cushion Pac 8. • Load Cells: Pull-back-Inline 3 point cable tension cell. Pull-down-Inline link located at pull cable at crown.
Rig Engine	Detroit Diesel Series 60 DDEC 475 bhp (354 kw) @ 2100 rpm Engine is fitted with remote and local ESD, electric start, residential muffler, positive intake shutdown & lagged exhaust.
Rig Engine Electrical System	Power supply consisting of two (2) 8D 1000 CCA batteries, 24 volt, 70 amperes alternator, 24 volt electric starter motor.
Hydraulics System	Five (5) hydraulic pumps with the following specifications: <ul style="list-style-type: none"> • Pump Number 1: Rexroth A10V250, 5,000 psi piston pump. Closed loop system for the top drive • Pump Number 2: Rexroth A11L0260, 3,000 psi piston pump. Open loop system for the top drive feed system and the general work winches. • Pump Number 3 & 4: Two (2) Rexroth A10V71 2400 psi piston pump. Open loop system for mast raise functions, pipe guide functions, power slip functions, mud saver functions, Make-up/Break-out wrench functions and survey winch functions. • Pump Number 5: Dennison Model T6DCC 3300 psi three (3) section vane pump. Open loop system for pipe handler functions, oil cooler functions, out rigger functions, BOP handler functions and spares. • Closed loop load sensing system on rotation circuit, Open loop on all others. • Deck mounted hydraulic tank with a capacity of 400 gallons • One (1) remote mounted hydraulically driven air to oil cooler with ambient temperature rating of 122 degrees Fahrenheit (50C).
Hydraulics Supply to Remote units.	Three (3) ¾", mounted on deck flange in front of hydraulic tank. 15 GPM @ 2500 psi supply.

Component	Description
Mast	<p>The mast is a steel fabricated twin beam design with raising and lowering from two multi stage hydraulic cylinders. Mast is designed to incorporate a Foremost hydraulic top drive with hydraulic cylinder feed system and a side loading hydraulic pipe handler. Mast also incorporates a fixed integral work floor with folding extension floor, legs and manual hydraulic jacks for levelling</p> <p>Features of the mast are as follows:</p> <ul style="list-style-type: none"> • Mast hook load capacity: 130,000 Lbs • Mast Height: Approximately 75 Feet • Top Drive Travel: 55 Feet • Mast Support: A-Legs mounted on Carrier • Mast Rest: Manually adjustable 12". • Mast Design: Designed as per API 4F recommended practices. • Ladder: Full height - one side only • Jib Booms: Two (2) with sheaves and lines • Stand Pipe: 3" 3,000 PSI with unions, remote gauge and 3" gate valve and hose socks as required. • Work Floor: 10' fixed height with foldable floor extension and two (2) telescoping support legs with hand cranks. Handrails as required in accordance with Australian standards. Deck is anti skid coated for safe non slip floor. Tie-back lugs, pins and safety pins for the telescoping legs. • Mast Raise Cylinders: Two (2) multi stage cylinders with double acting final stage.
Crown Block	<p>No crown block fitted – the drilling rig comprises two hydraulic cylinders which are used to generate hoisting and pull down forces thus requires a cable and sheave system as opposed to a conventional drilling rig which uses a draw works, crown block and traveling block assemblies. This cable system is revved through sheaves in the crown of the mast, base of the mast and traveling sheaves at the end to the hydraulic cylinders. The cylinder mounting in the crown and base are integral with the mast structure.</p>
Crown Saver	<p>No crown saver fitted – traverse cylinders are fitted and dead end before top head drive can contact the crown sheaves.</p>
Mast Lubrication System	<p>The mast itself is not required to be lubricated as the top drive has plastic slides and guides which do not require lubrication, however there are other components such as the sheaves, mast raise pivot and lifting pins etc that have centralized grease fittings for easy access.</p>
Top Head Drive Assembly	<p>One (1) Foremost heavy duty, Model F-100T-20 hydraulic top drive. This unit is specifically designed for shallow oil and gas applications and comes with the following features and specifications:</p> <ul style="list-style-type: none"> • Variable Speed Range: 0-200 RPM. • Variable Torque Capacity: 0 - 23,000 ft lbs • Maximum Hook Load: 65 Tons. (130,000 lbs) • Hydraulic Motors: Three fixed displacement Rineer motors • Mud Swivel: With full 3" thru-bore and hydraulic mud saver valve rated at 4500 psi. • Spindle: 6 5/8" API Regular Box. • Top Drive Travel: 55 Feet.
Floating Sub	<p>One (1) Foremost cushion sub for making up/breaking out threaded connections and protecting the top drive by prolonging bearing and gear life. Model – FCS306130</p> <p>4 1/2" API XH box x 4 1/2" API XH pin (down)</p>

Component	Description
Automated pipe handling system	<p>The Foremost Model 4000 heavy duty pipe handler is capable of operating with the mast vertical or horizontal when utilizing the optional angle drilling feature. The typical procedure for pipe handling is such:</p> <ol style="list-style-type: none"> 1. Pipe is racked horizontally in layers and rolled across the layer onto arms extending out the side of the hydraulic pipe bin. At this point the rig-mounted pipe handler can engage the pipe with its clamping jaws. 2. With the pipe firmly clamped, the pipe handler is raised along the mast to a point where it can be rotated in line with the mast angle. 3. Next, the pipe is brought into the mast in line with the top drive and lower string connection. 4. Using the pipe handler the lower tool joint of the pipe is then stabbed into the upper joint of the down-hole string. The top drive is lowered and rotated to make the upper connection. With the upper connection made, the pipe handler is released and returned to the loading position. The lower connection is then made using the top drive. <p>Pipe Handler Specifications:</p> <ul style="list-style-type: none"> • Lifting Capacity: 3,500 lbs. (load must be evenly supported between clamping jaws). • Jaw Range: 3 1/2" – 10 3/4". (Multi-range) • Travel Cylinder: Single acting 4" bore by 3" rod by 396" stroke • Hose Wrap: Sock style • Torsional Capacity: 10,000 psi to assist in breaking out tool joints
Casing Racks	Racks are integrated into primary pipe tub assembly which forms part of the overall tubular handling system.
Jib Boom	Two (2), crown mounted with hydraulic rotation
Winch for Jib Boom	<ul style="list-style-type: none"> • Make: Pullmaster. • Model: M12. • Cable: 200' of 9/16". (Non-rotating). • Hook: 13,000 lb. swivel hook with load lock. • Line Pull: 12,000 lb. "bare" drum. (Theoretical) 7,000 lb. "full" drum. (Theoretical). • Line Speed: 100 ft/minute "bare" drum. 175 ft/minute "full" drum. • Location: Mounted on back side of mast - complete with maintenance walkway and handrails. • Brake: Spring applied hydraulic release.
Survey Line Jib Boom	One (1), manual swing under top drive with storage latch.
Survey Line Winch	<ul style="list-style-type: none"> • Make: Pullmaster. • Model: H8B-3-30-6.with rapid reverse • Cable: 3500' of 3/16" cable. (non-rotating) • Hook: 3500 lb. swivel hook with load lock. • Line Pull Hoisting: 4111 lbs., "bare" drum. (Theoretical) 1779 lbs., "full" drum. (theoretical) • Line Speed Hoisting: 239 ft/minute, "bare" drum. 552 ft/minute, "full" drum • Line Pull Lowering: 956 lbs., "bare" drum. (Theoretical) 413 lbs., "full" drum. (theoretical) • Line Speed Lowering: 1028 ft/minute, "bare" drum. 2373 ft/minute, "full" drum. • Location: Mounted on back side of mast - complete with maintenance walkway and handrails. • Brake: Spring applied hydraulic release.

Component	Description
Power Make Up / Break Out Unit.	<p>The following equipment makes up the Makeup/Breakout Assembly:</p> <p>One (1) ALCO A05-04014 Model “G” low profile power slip assembly, hydraulically operated from the driller’s console with tubular capacity range from 2³/₈” to 13³/₈”. The following tooling is supplied;</p> <ul style="list-style-type: none"> • Master Slip Body : 20¹/₂” F/2³/₈” – 13⁵/₈” • Slip Bowl Liner: 8⁵/₈”-9⁵/₈”. • Slip Bowl Liner: 2³/₈”-7⁵/₈”. • FCR Slip Body: 3¹/₂” for 2³/₈”, 2⁷/₈” & 3¹/₂” tubulars, 5¹/₂” for 4”, 4¹/₂”, 5” & 5¹/₂” tubulars, 7⁵/₈” for 6⁵/₈”, 7”, & 7⁵/₈” tubulars, 9⁵/₈” for 8⁵/₈” & 9⁵/₈” tubulars • FCI Inserts: 3¹/₂” for 3¹/₂” tubing, 5¹/₂” x 4” for 4” pipe/tubing, 5¹/₂” x 4¹/₂” for 4¹/₂” pipe, 7⁵/₈” x 7” for 7” casing, 9⁵/₈” x 8⁵/₈” for 8⁵/₈” collars/casing, 9⁵/₈” for 9⁵/₈” casing. <p>One Alco (1) hydraulically operated make-up/break-out wrench (2-3/8” to 9-5/8”) used to make-up and breakout tool joints in conjunction with the power slips and the following specifications;</p> <ul style="list-style-type: none"> • Model: A05-04005-0052 Compact Iron Roughneck • Tubular Capacity: 2-3/8” TO 9-5/8”. • Maximum Clamp Force: 70,000 ft/lbs. at 2500 psig. • Maximum Attainable Make-up Torque: 75,000 ft. lbs. 40,000 ft. lbs. with current Foremost setting. • Maximum Break-out Torque: 93,000 ft. lbs. 40,000 ft. lbs. with current Foremost setting • Vertical Adjustment: 2 feet • Off-hole retraction: Yes
Blow Out Preventers	<ul style="list-style-type: none"> • 9” 3000#WP Spherical Style Annular BOP, Studded Top and Flanged Bottom with Nitrile Packing Element. • 9” 3000#WP Model ‘CT’ Single Ram BOP, Studded Top and Bottom with CSO (Blind) Ram Assembly Type 88 • 9” 3000#WP Model ‘CT’ Single Ram BOP, Studded Top and Bottom (Bottom Connection 2000# and 3000# Bolt Circles) with 4 1/2” Pipe Ram Assembly Type 88 • 9” 3000#WP Drilling Spool, Flanged Top and Bottom with One (1) 2 1/16” 5000#WP Flanged Outlet and One (1) 3 1/8” 3000#WP Flanged Outlet
BOP storage & transport system	For transport and storage purposes, the BOP is located on a steel frame which incorporates the test stump and is handled by forklift.
BOP Handling System	The BOP is suspended via cable to the BOP handling system. To assist in the alignment to the well head the system can displace the BOP vertically by 36” and horizontally by 48” Hydraulic cylinders are located beneath the drill floor to facilitate handling of the BOP stack on and off the bore hole. Clearance from Ground Level to underside of BOP mounting is 172” with rig fully elevated. Unit is certified and rated to lift 10,000 lbs.
BOP Test Stump	1 x 9” travel & test stump incorporated as BOP storage rack

Component	Description
BOP Accumulator	<p>One (1) CTI 4-Station 60-US Gallon BOP Control System, complete with E/H PLC Driller's Control Package.</p> <p><u>Consisting of the following:</u></p> <ul style="list-style-type: none"> • Heavy-duty frame with forklift pockets, drip pan and decking located in combination building • Heavy duty fluid reservoir, 160 US Gallon usable capacity, skid-mounted, with fill port, vent port, inspection ports, clean-out ports, baffles and fluid level sight gauge. • One 7 GPM Pump Package, including Cat 650 triplex pump, pump pulsation dampener, 15HP TEFC electric motor vertically mounted with adjustable belt drive, motor starter and automatic pump control. • One NOV 40:1 air pump package, complete with suction valve, suction filter, hydro-pneumatic pump pressure switch, air filter-regulator-lubricator assembly, and air bypass manifold. • One 3/4" 3500 PSI system pressure relief valve, self-resetting and reservoir-vented. <p>One 60-US Gallon Accumulator Manifold, including;</p> <ul style="list-style-type: none"> • Six 11-US Gallon separator-type accumulators, frame-mounted in an isolation manifold, separate from the main unit. • One, 3/4 Full Flow pressure reducing and regulating valve, manually adjusted, for Manifold pressure. Reservoir mounted. • One, 3/4 Full Flow pressure reducing and regulating valve, hydraulic failsafe adjusted with manual override, for annular pressure. Reservoir mounted. • One 1" Manifold Regulator By-pass Valve with hydraulic remote actuator. Reservoir mounted. • One 3/4" 3,500 PSI manifold pressure relief valve, self-resetting and reservoir-vented. • Four 1" BOP control valves with hydraulic remote actuator and manual override, for control of annular, pipe rams, blind ram, and HCR. Reservoir mounted. • One Gauge Panel with (4) 4" liquid-filled hydraulic pressure gauges, for indicating Rig Air, Annular, Manifold and Accumulator pressures. • One Emergency Nitrogen Back-Up Package, including (1) mounting frame for (3) nitrogen cylinders check valves, isolation valve, tie-in manifold, and Nitrogen Manifold gauge as per AEUB requirements. The nitrogen cylinders are frame-mounted, separate from the main unit. <p>One Main Unit Steel Enclosure, 24" x 36" x 8", NEMA 4 Classification, complete with the following:</p> <ul style="list-style-type: none"> • (3) Electro-hydraulic pressure transducers for indicating Annular, Manifold and Accumulator pressures. • Hydraulic supply filter, with isolation valve. • 1) Master hydraulic solenoid, single-acting, for remote operation failsafe. • (6) Remote function solenoids, double-acting, for remote valve operation (Annular, Pipe Ram, Blind Ram, HCR, Annular Pressure Increase/Decrease, Regulator Bypass).
BOP Remote Control Panel	<p>One Driller's E/H PLC Remote Panel Class I Div II Rating, AB SLC 5/04 Processor, hold to operate pushbutton, four sets illuminated push buttons for BOP remote functions, one manifold regulator bypass, one annular regulator increase/decrease remote function, four electronic meters for Rig Air, Accumulator, Manifold and Annular Pressures, one (150ft) Shielded pair cable for communication, and one 8-bit analogue card at Main control system. Program and add all alarms, visual and audible, required by API 16D.</p>

Component	Description
Choke Line Valves	Choke Line Valve Assembly consisting of; <ul style="list-style-type: none"> One(1) 3 1/8" 3000#WP API Flanged End Gate Valve with (HCR) Hydraulic Actuator One(1) 3 1/8" 3000#WP API Flanged End Manual Gate Valve
Kill Line Valves	Kill Line Valve Assembly, consisting of; <ul style="list-style-type: none"> Two(2) 2 1/16" 5000#WP API Flanged End Manual Gate Valve One(1) 2 1/16" 5000#WP API Studded End Piston Style Check Valve
Choke Line	3" 5,000 psi CORFLEX type choke hose with 3" bore. Fitted with 3-1/8" x 3000 psi flanges. 6m long hose
Kill Line	2-1/16" 5,000 psi kill hose with 2" bore fitted with type 1502 hammer unions.
Choke Manifold	Drilling Choke Manifold Assembly, 3 1/8" 3000#WP Thru Gut Line with 2 1/16" 5000#WP Wing Valves and Adjustable Disc Style Chokes Major Components List; <ul style="list-style-type: none"> Nine(9) 2 1/16" 5000#WP API Flanged Manual Gate Valves Two(2) 3 1/8" 3000#WP API Flanged Manual Gate Valves Two(2) 2 1/16" 5000#WP API Flanged Disc Style Adjustable Chokes One(1) Choke Electric Drive Controller for Remote Choke Function One (1) Electric Remote Choke Control Panel with Allen Bradley SLC 5/04 Series PLC processor, Choke Position Indicator, Two (2) Pump Stroke Counters, Pressure Read-Out Meters for Shut-In Casing Pressure and Shut-In Drill Pipe Pressure. All Required Sensors and Connecting Leads to be built into stand-alone SS EH/PLC Control Panel enclosure.
Flareline	3" Sch80 x 8 off pipe @ 5.95 metres (47.6m) with NPT thread both ends and type 1502 hammer unions fitted each end.
Mud Gas Separator	24" mud/gas separator.
Mud Gas Separator Vent Line	6" Sch40 x 8 off pipe @ 5.95 metres with NPT thread both ends and type 1502 hammer unions fitted each end.
Drillers Cabin	One (1) skid based hydraulically elevated doghouse building encompassing operators console, air-conditioning with clear 180° peripheral view of drill site, tool shack and 285 Bbl (34,000 litre) water tank under dog house when raised. Doghouse incorporates: Drillers console BOP remote control panel Remote mud pump controls Centralised emergency stop control Pipe handler controls Engine control (start / stop) and full engine monitor instrumentation
Drillers control panel	Foremost manufactured control panel is located in doghouse with the following features and specifications: <ul style="list-style-type: none"> Type: 24 Volt DC electric over hydraulic with Parker IQAN electronic control system. Power Supply: 24V DC supplied by deck engine. Operation of mast raising and trailer (deck) leveling is located on the carrier and controlled separately from there.

Component	Description
Mud Pump	One (1) skid based Gardener Denver model PZ-7 (550 Hp) triplex pump. Pump have the following features; <ul style="list-style-type: none"> • Detroit Diesel Series 60 Electronic Engine (630hp) with air intake positive shutoff and 12 volt electric start. • Allison 6061 automatic transmission • 10,000 psi dampener, shear relief and mud gauge. • 8" suction line with "air up" unions and strainer fitted inline. • Controls for the pump are by remote control able to be controlled from the doghouse. • Lagged residential style muffler and exhaust piping. • 7" Liner,507 Gpm,1673 Psi,6-1/2 Liner,437Gpm,1947Psi,6" Liner,373 Gpm,2277 Psi,5-1/2Liner,313Gpm,2710psi,5" iner 259Gpm,3279Psi,4-1/2" Liner,210Gpm,4048Psi • 10 Gallon Pulsation Dampener
Charge Pump for Mud Pump	Pump are fitted with 5" x 6" charge pumps located on pump skid. The charge pump on the PZ-7 is belt driven.
High Pressure Mud Lines	<ul style="list-style-type: none"> • Size and Rating: 3" XXH, 3,000 psi working pressure • Flow Tee: 3", 3000 psi working pressure located on front of trailer, right hand side, for connection to customer supplied mud pumps. • Hammer Unions: 3", fig. 1502
Standpipe manifold	<ul style="list-style-type: none"> • Stand Pipe: 3", 3000 psi working pressure.
Standpipe Isolation Safety Valve	1 X 3,000 psi hydraulically actuated ball type valve located at lowest point on rig standpipe manifold to shut in the standpipe. Valve controlled from drillers console
Mud Tank System	Active capacity 333 bbl single tank Mud System mounted on skid base built by Rig Shop, Edmonton, Canada. Width-11'-5-3/4", Height-11'-6", Length 45'-1-1/2", Wt-53,300Lbs. Power-415V 50 Hz. 1 x 116 bbl shaker tank with sand trap, 1 x 72 bbl settling tank, 1 x 21 bbl trip tank, 1 x 94 bbl suction tank, 1 x 30 bbl pill tank. Total 5 compartments Mixing system suction and discharge in each tank Mud Pump suction from each tank Submersible electric agitators in each mix/volume tank. One (1) 5"x6"x11" Mud hog centrifugal pump with 50Hp AC motor is used for the main mixing pump. One (1) 250 series centrifugal pump is for the hole fill pump Two (2) Agitator's One (1) Direct Drive Stripping Tank Mixing Agitator
Mud mixing equipment	1 x Mixing hopper from independent centrifugal pump. Mounted on mud tank deck above the centrifugal pumps. 1 x chemical mixing drum for caustic and dangerous chemicals

Component	Description
Solids Control Equipment	<p>One (1) MONGOOSE PT shale shaker capable of adjusting on-the-fly as solids characteristics change. The Mongoose PT gives the unprecedented ability to change the shaker motion as the characteristics and volume of the cuttings change. It can go from linear to elliptical motion with the simple flip of a switch.</p> <p>The MONGOOSE PT shaker allows you to use linear motion while drilling top-hole sections where heavy, high-volume solids usually are encountered. These intervals require shakers to generate high G-forces to effectively move dense solids across the screens. As the drilling volume and solids characteristics, the MONGOOSE PT can be changed to the gentler elliptical mode, reducing the G-forces. This, in turn, extends screen life, while delivering drier solids, increasing fluid recovery and overall reduced operating costs.</p> <p>The MONGOOSE PT shaker replaces the typical flow line trap or possum belly with an innovative distribution box. The unique design of the box redirects flow evenly across the entire width of the screen, increasing fluid handling capacity. It also dampens the velocity of the fluid in the flow line for more effective solids separation. The MONGOOSE PT is built to accommodate pre-tensioned screens</p>
Day Water Tank	One (1) 285 bbl (34,000 litre) water tank located under the doghouse when raised.
Generators	<p>One (1) Rig generator located in combination building with the following specifications; Model Number: GEH275-SAE Genset Rating: Prime rated @ 250kVA, 200kW, 3-phase, 415v, 50Hz, 1500rpm Engine Model: 1306C-E87TAG4 Perkins diesel engine, direct coupled to a brushless alternator Fuel Tank: 550 litre base mounted with float switch and fuel solenoid with self banded engine bay. Canopy: Sound attenuated, lockable enclosure rated at 61.7 dBa@7m on full load</p> <p>One (1) silenced 35KVA Generator with spill management tray. This unit will service both the site unit and accommodation blocks and used as backup generator for lighting and koomey power pack if required.</p> <p>Camp generators comprise of two (2) 65 KVA Generators in silenced self banded engine bay. The generators have a load management system where the generators shut down and start up automatically based on load.</p>
Compressors	One (1) only Champion CSF30 Rotary screw air compressor rated at 174cfm @ 7.8bar. Air is reticulated via quick disconnect hoses and fittings to various building and engine modules for positive shutdown (strangler valves), operation of doghouse window wipers, air supply to koomy backup power pack and general use as required.
Bulk Fuel Storage	<p>1 x 4,000litre double skinned fuel tank (day tank) is located on the end of the combination building and incorporates two (2) six litre per minute pumps (one acting as backup) and is reticulated via an open loop circuit around the site to all operating stationary engines.</p> <p>The tank also features a 55 litre per minute pump with a 3 x way valve thus enabling filling or emptying the day tank via a filter out of or into a bulk fuel tank located on an 8x8 MAN truck.</p>
Oil & Lubricant Storage	Dedicated banded storage is located in an enclosed area in the combination building with skid mounted oil storage basket and forklift tine channels for easy removal for and placement when being cleaned.
Dangerous Goods Storage	Storage cabinet for paints and aerosols in the Rig tool shack / fitters store.

Component	Description
Waste Oil Storage	1000 litre double skinned tank.
Tool Shack / Fitters Store	Incorporated as part of doghouse building, the tool shack / fitters store is for mechanical, electrical and general purpose use with a hard bench top, vice, tools, parts storage and chemical cupboard.
Rig lighting	<p>Stahl 2 x 36w florescent EX rated (zone 1) light fittings are located in the following locations: 7 x rig mast, 1 x cellar, 2 x rig deck, 4 x mud tank deck including shaker, 1 x mixing pump room, 1 x choke manifold room, 1 x stairwell on mud tank, 1 x stairwell of doghouse, 1 x inside doghouse, 1 x above fuel (day) tank, 1 x each pipe tub (3 in total), 1 x koomy room, 1 x compressor room, 1 x oil storage room and 1 x rig generator.</p> <p>In addition for flood lighting we have installed several Cooper EX rated (zone 1) L.E.D lighting which feature 100V to 300V hence not affected by voltage fluctuations, instant lighting when switched on.</p> <p>All L.E.D lights are located as follows: 4 x top of doghouse pointing in various directions including up the mast, 4 x on the combination building pointing to strategic locations. Zone rated lighting compliant to API500-505.</p> <p>All lights are protected via earth leakage and circuit breakers, PO's have lockout (isolation) capability and all fitted with wire safety harnesses.</p>
Rig Emergency Lighting	<p>The lighting circuit is split into two circuits. Emergency lighting is provided by the Stahl 2 x 36 lights with internal battery backup. If power is lost through failure of the main rig generator, the following areas maintain emergency lighting: mast lights, stairwells, cellar, koomy room, inside doghouse, choke manifold room, generator, fuel pump room, compressor room and carrier.</p> <p>Auxiliary power is able to be provided to the above-mentioned "plus" the koomy power pack in the event it needs to be closed. Power is provided via an auxiliary generator located off the site generally used to power the tool pusher's shack, company man / geo shack, crib room / ablutions and onsite accommodation units.</p>
Crown Light	One (1) 240 Volt Red Aviation warning light
Drill Pipe	<p>200 joints of 3½" OD 13.3# G-105 drill pipe with NC38 connection, Range 2 with EU, tool joint OD 5", ID 2 7/16", box tong 12½" and pin tong 10"</p> <p>125 joints of 4½" OD 16.6# G-105 drill pipe with NC 46 connection Range 2 with EU, tool joint OD 6¾", ID 3", box tong 12" and pin tong 9"</p>
Drill Collars	<p>8 x 4¾" spiral drill collars with NC38 connection, NS-1 rated, OD 4¾", ID 2¼" with Boreback box and pin stress relief groove.</p> <p>8 x 6¼" spiral drill collars with NC46 connection, OD 6¼", ID 2¼" with Boreback box and pin stress relief groove.</p>
Tubular Storage	Three (3) fully engineered pipe tubs which when located on site form the overall tubular handling including casing racks and the pipe presenter for presenting the tubulars to the Foremost 4000 series pipe handler.
Crossover Subs	<p>195mm OD x 40mm ID x 275mm S/S NW pin to 6⅝" reg. box</p> <p>120mm OD x 35mm ID x 110mm S/S NW pin to 3½" IF pin</p> <p>145mm OD x 35mm ID x 100mm S/S 4" IF to NW pin</p> <p>170mm OD x 60mm ID x 260mm S/S 4½" IF to 3½" reg. pin</p> <p>296mm OD x 45mm ID x 260mm S/S 4½" reg. pin to 6⅝" reg. box</p> <p>296mm OD x 58mm ID x 510mm S/S 6⅝" reg. box to 4½" reg. pin</p> <p>296mm OD x 38mm ID x 450mm S/S 6⅝" reg. box to NW pin</p> <p>160mm OD x 65mm ID x 370mm S/S 4" IF pin to 2⅞" IF box</p> <p>161mm OD x 55mm ID x 500mm S/S 4" IF box to 4½" IF pin</p> <p>120mm OD x 65mm ID x 478mm S/S 3½" IF pin to 3½" IF box</p> <p>160mm OD x 65mm ID x 500mm S/S 4½" IF pin to 3½" IF box</p> <p>145mm OD x 58mm ID x 490mm S/S 3½" IF box to 4" IF pin</p>

Component	Description
Saver Subs	114mm OD x 55mm ID x 648mm S/S 3½" IF box to 3½" IF pin 122mm OD x 60mm ID x 505mm S/S 3½" IF box to 3½" IF pin 120mm OD x 57mm ID x 500mm S/S 3½" IF box to 3½" IF pin 125mm OD x 59mm ID x 500mm S/S 3½" IF box to 3½" IF pin 120mm OD x 65mm ID x 500mm S/S 3½" IF box to 3½" IF pin 108mm OD x 37mm ID x 365mm S/S 3½" IF box to 3½" IF pin 120mm OD x 60mm ID x 500mm S/S 3½" IF box to 3½" IF pin
Bit Subs	150mm OD x 73mm ID x 1026mm S/S 4½" IF box to 4" reg. box 181mm OD x 77mm ID x 840mm S/S 6⅝" reg. box to 4½" IF box
Casing Running Subs	257mm OD x 63mm ID x 480mm S/S 9⅝" Buttress pin to 3½" IF box 220mm OD x 60mm ID x 460mm S/S 3½" IF pin to SFJ pin 177mm OD x 55mm ID x 505mm S/S 3½" IF box to 7" Buttress pin 177mm OD x 55mm ID x 480mm S/S 3½" IF box to 6⅝" SFJ pin
Inside BOP	1 x 3½" XH NC38 x 5" OD
Kelly Cock	1 x 3½" XH NC38 x 5" OD Kelly Cock.
General rig wash down pump	One (1) 60x50x150 electric operated water transfer pump permanently located in tool shack / fitters store, can be diverted via 1" hose for high volume low pressure wash down requirements.
Fire Suppression System	One (1) x 65 Litre Rise Of Pressure Suppression System fitted to Foremost Drill Rig. One (1) x 45 Litre Rise Of Pressure Suppression System fitted to Gardener Denver PZ-7 pump skid. One (1) x 45 Litre Rise OF Pressure Suppression System fitted to rig generator
Rig Motor Remote Emergency Shutdown System	All engines on site have the ability to be shutdown individually through use of the independent stop devices fitted at various easy to reach locations on each piece of equipment. Shutdown can be done by fuel shut off via fuel solenoid or actuation of air operated positive shutoff intake valves fitted. In addition, we have the ability to shut down the total site via remote control using two (2) Elsema FMR1501- 8 channel Transmitters. One is located in the doghouse at the drillers control panel and the other is located at the emergency assembly area. With distinct individual channel allotted to each piece of equipment, we have the ability to individually close the equipment down, or the total site. All engine controls are 10-28Volt AC/DC 151MHz and are hazard zone approved.

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