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**CABOT 900 SERIES
SELF PROPELLED DRILLING RIG
REFURBISHED**



BHL INTERNATIONAL, INC.

5223 Hopper Rd.

Houston, Texas 77093

Phone: (281) 449-5762 * Fax: (281) 449-9009

www.bhlinternational.com

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SECTION 1

CARRIER AND DRAWWORKS

<u>ITEM</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	One (1)	CABOT 900 SERIES SELF PROPELLED DRILLING RIG Consisting of Model 2346 single drum drawworks, Parmac V-80 assist brake and rotary drive. Two Caterpillar 3408 diesel engines powering drawworks, rotary drive and roading chassis. 117', 350,000# API capacity telescoping mast includes racking board and hydraulic catworks. Mounted on Cabot 900 series chassis. 17' telescoping type substructure with pipe slide, BOP dolly and track system.
1.1.1		MODEL 2346 DRAWWORKS 12" x 46" brake rims, 23" x 44" drum barrel. 60,000# single line pull 30" 2-plate clutch. LeBus type grooved jacket for 1-1/8" wire line. Includes turn back rollers.
1.1.2	One (1)	ASSIST BRAKE Parmac V-80 brake with overrunning clutch. Includes supply and discharge water manifold with air operated supply. Inlet and outlet valves. Driller's console includes air pressure regulator for brake modulation control and hand valve control of friction brake function.
1.1.3		WATER MANIFOLD Water inlet circuit from hammer union alongside rig to assist brake and to water circulating brake rims. Control valve in assist brake inlet line modulated by hand valve at driller's control. Independent discharge line from assist brake and rim brakes to hammer union alongside rig.
1.1.4	One (1)	CHARGE PUMP 3 x 4, 11-3/4" impeller, 1150 RPM, 15 HP, 55'-70' total head and 350 GPM max. volume required.
1.1.5		RESERVOIR 60 BBL minimum volume.

ITEM QTY.	DESCRIPTION
1.1.6	<p>DRILLER'S CONSOLE</p> <p>Located at 17' high elevated position with folding platform hinged to mast. Pneumatic control for drum clutch, engine throttle, engine emergency shutdown, transmissions and rotary clutch also included. Stairs with handrails form platform to carrier walkway. Mechanical controls located adjacent to controls for drawworks brake.</p>
1.2	<p>CABOT CARRIER MODEL C9-962-300</p> <p>Triple axle front, triple rear axel carrier with 12 x 4 drive, 300" wheel base (bogie center to bogie center). High strength steel fabricated frame. Eaton EFA-22T5 triple axles (66,000# service rating) with 16-1/2" x 6" air brakes on all wheels and with spring suspension. Eaton DP480P double reduction powered tandem and NeWay air suspension leading third axle, all with 16-1/2" x 7" air brakes, walking beams suspension an powered tandem (68,000# service rating). Has spring safety brakes mounted on two powered axles. Six 18:00 x 22.5 16-ply nylon highway tread front tires and twelve dual mounted 10:00 x 20 12-ply all purpose rear tires. Ross 503 steering with Garrison hydraulic power assist. One-man cab with heater, defroster, two bus type rear view mirrors, driver's instrument panel, adjustable bucket seats with shock absorber mounted and seat belts. Mechanical support legs, 2-sets required (2 legs per set), rear and midship for greater lateral stability. One 125-gallon roading fuel tank with float valve for inlet from location fuel supply, one tool box, clearance and directional lights, tow bars front and rear.</p>
1.2.1	<p>WALKWAY AND STAIRS</p> <p>Includes walkway along side of unit on driller's side extending from rear of unit to engine area. Stairways from walkway to ground. Walkways and stairs including handrails.</p>
1.3	<p>RESERVE LINE SPOOL</p> <p>Hydraulic powered with capacity for 2,250' of 1-1/8" wire rope.</p>
1.4	<p>DEADLINE ANCHOR</p> <p>Provision for and including Hercules 118 type wire line anchor.</p>

ITEM QTY.	DESCRIPTION
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1.5 **FRONT GUY LINE ANCHORAGE**
Guy lines anchor to front of carrier. Includes wireline, tail chain, forged steel boomers, thimbles and clamps.

1.6 **DRAWORKS POWER**
Two Caterpillar 3408 Series Diesel Engines. No. 1 engine equipped with Allison CLBT-5961. No. 2 engine CLT-5961 torque converter transmission with lock-up providing five forward and one reverse speed. Each engine equipped with variable speed governor, belt driven Bendix V-1000 (24 CFM) air compressor, horn warning system for high water temperature/low oil pressure, commercial silencing muffler, dry type air cleaner, air starters, and engine instruments.

SPECIFICATIONS

Basic Output: 456 HP per engine at 2100 RPM;
 Total HP 950
Cooling: Radiator with suction fan
Starting: Air
Transmission Speed : 5 forward, 1 reverse
Shift Control: Air over hydraulic with air position
 indicator

AIR SYSTEM

One Bendix V-1000 air compressor belt driven by each engine. Cold Start Bendix TuFlo compressor driven by Wisconsin-Hatz
5 HP diesel engine with combination electric/hand crank starting for starting air build-up. Two Bendix "System Guard" air dryers, 60 gallon starting air tank and wet tank-dry tank rig air system.

DRAWORKS DRIVE

Allison CLT-5961 and CLBT-5961 combination torque converter transmission, each driving through Model 450 right angle drive to drawworks final drive compound. 5 forward speeds and 1 reverse to drawworks and rotary.

ROTARY DRIVE

Heavy duty propeller type drive for rotary table through 27-1/2" size. Includes full air rotary clutch, herringbone reduction gear and oil bath chain elevated rotary drive from drawworks to rig floor. Elevated drive hinge mounted for

<u>ITEM QTY.</u>	<u>DESCRIPTION</u>
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easy transport and rig-up on rig carrier. Chain drive always remains made up.

Specifications: (With Typical 3.75:1 Ratio Rotary Table)

- Maximum Rotary Table Speed – 220 RPM
- Rotary Speeds – 5 Forward and 1 Reverse
- Elevated Rotary Drive Chain – 1-1/2” Two Strand
- Propeller Shaft – Spicer 1880 final Drive, Spicer 1810 ahead of Elevated Drive
- Rotary Clutch – Two Plate 18”

HYDRAULIC POWER

36 GPM 2000 PSI (maximum) Pressure system, provided by either of two pumps. Tong selector valve and throttle control at driller’s position.

KELLY SPINNER PROVISION

Hydraulic power for Kelly spinner with controls at driller’s console. (Does not included Kelly Spinner)

HANDLING WINCH

Located on rig. Planetary type hydraulic winch, power in and power out. Automatic fail safe brake, with controls at driller’s station. Includes sheave in mast.

Specifications:

- Wire Line: 1/2”
- Wire Line Capacity: 335’
- Max Pull: 8,800# (1st layer)
- Max. Speed: 95 FPM (At 35 GPM) (1st layer)

2

MAST

117’, 350,000# Capacity, telescoping open face structural mast with legs of cold drawn AISI seamless alloy heat treated steel tubing. Constructed in two sections, the upper section telescoping into the lower section for over the road position. Adjustable support screws in mast legs; folding ladder, level and tilt indicator.

ITEM	QTY.	DESCRIPTION
2.1.1		<p>CROWN BLOCK ASSEMBLY Integral type, welded box construction drilling crown assembly. five 30" sheaves and one 36" offset sheave for fast line. 1-1/8" grooving</p>
2.1.2		<p>CROWN NEST With guard rail and expanded metal floor</p>
2.1.3		<p>HYDRAULIC MAST RAISING, LOWERING AND EXTENDING MECHANISM Two double acting, three stage telescoping type hydraulic raising and retracting cylinders. Upper mast section extending with two extending cylinders. Additional to mast hydraulics for dtwo engine rigs so that earthier engine of two engines rig may be used for hydraulic power functions. Includes pump, drive, manifolding, lines, control valves, oil reservoir and fluid.</p>
2.1.4		<p>MAST SUPPORT At front and rear of carrier, supporting mast in over-the – road position.</p>
2.2		<p>RACKING BOARD Heavy duty welded construction with derrick man's platform of expanded metal. Side-mounted racking fingers furnished to facilitate uniform racking and prevent swarming. Has locking pins at open ends. Maximum capacity 10,300' of 4-1/2" drill pipe (6-1/2" tool joints) and automatic unfolding and folding of the Racking Board during extension and lowering of upper section of mast</p>
2.3		<p>STANDPIPE 4-1/2" O.D. with fabricated gooseneck, 5000# working pressure (no valves, unions or hoses.</p>
2.4		<p>TONG WEIGHT BOXES Complete with pulleys and lines, (less weights)</p>
2.5		<p>LIGHTING SYSTEM Fluorescent lighting system of weatherproof type. Neoprene jacketed cable rigidly attached to mast structure.</p>

ITEM	QTY.	DESCRIPTION
		Two double tube unites lighting floor area, one double tube unit lighting drawworks and four double tube units lighting racking board and rod board area. Shielded bulbs at crown. Plug in type connections for each light. Circuit breaker and junction panel located at operators position.
2.5		WIND GUYS One set wind guys consisting of two 3/4" cables from crown and two 9/16" cables from racking board. Each equipped with 10' tail chain. Used on Cabot cross type substructure.
2.6		RIG BASE 9' wide x 40' long x 6-1/2" deep. Structural steel covered with 1/4" plate top and bottom, complete with access hinged and loading capabilities.

SECTION 3
SUBSTRUCTURE

ITEM	QTY.	DESCRIPTION
3.1		<p>Cabot “T” Type 15’-6” Substructure.</p> <p>Features</p> <p>Derrick base and rig base 11’ x 13’ x 15’ with 5000 psi mud lines, BOP cart and rails, stairs, walkways, safety railings, V-door ramp, and catwalk.</p> <p>Maximum rotary (casing load) is 350,000 lbs. simultaneous with a setback load of 200,000 lbs. for a total of 550,000 lbs. substructure capacity.</p>

SECTION 4

MUD SYSTEM

ITEM	QTY.	DESCRIPTION
4.1	Two (2)	<p>800 HP triplex mud pumps, unitized with 800 HP engines (Refurbished).</p> <p>Fluid end complete with pistons and liners, flanged suction manifold, discharge manifold with flanged connections and discharge strainer cross.</p> <p>Includes discharge pulsation dampeners, flanged gate valves spring loaded relief valves with adjustable pressure setting up to 5000 psi.</p> <p>Includes pump pressure gauge, hydraulic seat puller assembly with pump, hose and heads to fit valve seats in above pumps.</p>
4.2	One (1)	<p>Mud Tank System composed of two (2) individual round bottom tanks with a total capacity of 900 BBLs.</p>
4.3	Two (2)	<p>Shale Shakers, including motors, starters and wiring (explosion proof).</p>
4.4	Seven (7)	<p>Mud agitators, driven by 10 HP explosion proof A.C. motors, each with suitable gear box, coupling and guard. The exact number of units will depend on the number of compartments requiring agitation (Refurbished).</p>
4.5	One (1)	<p>Vertical Atmospheric Degasser (NEW).</p>
4.6	One (1)	<p>Desander with two (2) each 12" diameter polyurethane cyclones rated at 800-1000 gpm (NEW).</p>
4.7	One (1)	<p>Desilter with twelve (12) polyurethane cyclones rated at 800-1000 gpm (NEW).</p>
4.8	One (1) Lot	<p>High-Pressure and Low-Pressure Mud Line Piping System.</p>

SECTION 5
INSTRUMENTATION

ITEM	QTY.	DESCRIPTION
5.1	One (1)	SPM Meter with Totalize Counter
5.2	One (1)	Rotary Torque Indicator
5.3	One (1)	Tong Torque Indicator
5.4	One (1)	Weight Indicator
5.5	One (1)	Pump Pressure Indicator
5.6	Seven (7)	Recorders to measure: <ul style="list-style-type: none">• Bit Weight• Rate of Penetration• Rotary Table RPM• Rotary Table Torque• Pump SPM• Pump Pressure• Pump Return Flow

SECTION 6

INDEPENDENT ENGINE / GENERATOR SET AND COMPRESSOR

ITEM	QTY.	DESCRIPTION
6.1	Two (2)	Detroit Diesel Series-60 diesel engines, 475 HP @ 2100 rpm (Refurbished).
6.2	Two (2)	Air compressor rated at 125 psi powered by 40 HP, 3 phase, 60 Hz electric motor unitized and mounted on steel skid base (NEW).
6.3	One (1)	Air Dryer (NEW).
6.4	One (1)	Cold Start Engine (NEW).
6.5	One (1)	200 Gal. Air Receivers, 125 psi complete with relief valve pressure gauge and automatic water ejector tap (NEW).
6.6	One (1)	Utility building to house above equipment (NEW).

SECTION 7

BOP EQUIPMENT

ITEM	QTY.	DESCRIPTION
7.1	One (1)	11" x 5000 psi Shaffer (or equivalent) Annular BOP (Refurbished).
7.2	One (1)	11" x 5000 psi Shaffer (or equivalent) Double BOP (Refurbished).
7.3	One (1)	11" x 5000 psi Drilling Spool (NEW).
7.4	One (1)	Control System, Four (4) Stations, Eight (8) Bottles with Electric Triplex Pump powered by one (1) 20 HP Electric Explosion Proof Motor and one (1) Air Pump Rated at 9 gallons per minute (NEW).
7.5	One (1)	5000 psi Choke and Kill Manifold with five (5) 2-1/16" x 5000 psi and two (2) 3-1/16" Manual Valves, two (2) Adjustable Chokes, one (1) Buffer Tank, all mounted on one (1) Skid with atmospheric Separator (NEW).

SECTION 8

DRILL STRING TUBULARS

ITEM	QTY.	DESCRIPTION
8.1	8,000 FT.	3 ½" Drill Pipe, Class 1, Grade E Nominal Weight 13.3 (NEW)
8.2	600 FT.	6" D.C, 2 13/16 O.D., 144 KG/M 6 3/8" T.J. 4 ½" IF Thread Type (NEW)

SECTION 9

PIPE HANDLING TOOLS

ITEM	QTY	DESCRIPTION
9.1		3 1/2" D.P. Elevator Web Wilson center latch elevator rated capacity 150 tons with safety latch.
9.2		Links 2 1/4" 108" Web Wilson links rated capacity 250 tons.
9.3		D.P. Slips Slips for 3 1/2" O.D. Drill pipe type Varco
9.4		Casing Elevators Web Wilson side door elevators, rated capacity 200 tons with safety latch for sizes 13 3/8, 9 5/8, 7" O.D.
9.5		Tubing Elevators Web Wilson center latch, rated capacity 100 tons, bored for 2 7/8" O.D. tubing.
9.6		Casing Slips Varco type multi-segment casing slips for 13 3/8", 8 5/8", 7" casing
9.7		Drill Collar Slips Varco type multi-segment D.C. slips
9.8		Safety Clamps
9.9		D.C. Elevators Web Wilson Type side door elevator complete with safety latch
9.10		Rotary Tongs Web Wilson type, extra heavy duty rotary and casing tongs with standard lever and hanger assembly less lug jaws. 3 1/2"-4 1/2" 4"-5 1/4" 5"-7 1/4" 6 7/8"-8 5/8" 9"-10 3/4" 13 3/8" -14 3/8"

SECTION 10

MISCELLANEOUS

ITEM	QTY.	DESCRIPTION
10.1	One (1)	200 Ton Block/Hook Combination, grooved for 1-1/8" Wireline (Refurbished).
10.2	One (1)	200 Ton Swivel (Refurbished).
10.3	One (1)	3-1/2" Hex Kelly with Drive Bushings (NEW).
10.4	One (1)	Hydraulic Kelly Spinner (NEW).
10.5	One (1)	9000 Gallons Fuel Tank (NEW).
10.6	One (1)	200 BBL Water Tank (NEW).
10.7	One (1)	45 Ft. Catwalk (NEW).
10.8	One (1)	4 Ft.-wide V-Door Ramp (NEW).
10.9	One (1)	17-1/2" Rotary Table (Refurbished).

THIS PROPOSAL IS SUBJECT TO PRIOR SALE