

FOR MORE DETAILS CONTACT: info@petrowatch.com

SPECIFICATIONS OF 1400 HP OR EQUIVALENT ELECTRICAL LAND RIG

(NOTIONAL DRILLING CAPACITY OF 4700 MTRS)

THE RIG IS COMPLETE IN ALL RESPECTS AND EQUIPPED WITH THE FOLLOWING	
1	2
MAIN RIG:	Yes, Available; NATIONAL 110UE, AC/SCR, 1500 HP
(A) MAST: Mast design in accordance With API specification 4F.	Yes, Available; As per API 4F, Capacity 800,000 lbs. Low Lift Type.
1. Clear Height – 142 ft. (min.) Clear height of the mast. The offered rig accommodates all the required equipments including Top Drive System of required capacities.	142 ft
2. Base Width – 25 ft (approx.)	25 ft.
3. Static Hook Load Capacity with 12 lines strung.	800,000 lbs
4. Wind Load Capacity with full set back minimum 84 miles / hr.	84 miles/hr
5. Wind Load Capacity with bare Mast – minimum 100 miles hr.	100 miles/hr
* Crown Block capacity matching with mast Capacity.	Yes, Make: CONTINENTAL EMSCO Model : RA-52-7-500CD
6. Mast is equipped with the following in addition to standard accessories.	
i. All the accessories to raise Mast with Draw Works.	Yes, Available
ii. Adjustable racking platform with adequate capacity for 5” O.D. D/P & up to 9.1/2” O.D .D./C.	Yes, Available
III. Adjustable Casing Stabbing Board.	Yes, Available
iv. Topman Escape Device & Fall Prevention Device.	Yes, Available; Geronimo Make
(B) Sub-Structure: In accordance with API specification 4F.	
1. Derrick Floor Height : 25 ft.	30 ft

2. Clear height (Minimum) below rotary beam – 20’	25 ft
3. Casing Load Capacity	800,000 lbs
4. Simultaneous Setback Capacity	5,00,000 lbs
5. Mouse hole pipe/ rat hole pipe.	Yes, Available
6. Dead line anchor with capacity of 800,000 lbs. dead line pull, grooved for suitable wire line as per rig system, to house a tension type load sensor, complete with wire line snubs.	Yes, Available, National Make Dead line anchor with capacity of 800,000 lbs. Dead line pull, grooved for 1 3/8” wire line, to house a tension type load sensor, complete with wire line snubs
(C) Draw Works:	Yes, Available; NATIONAL 110UE
1. Dual Electric Motor Drive arrangement,	Yes, Available, 2 Nos.; GE 752 Dual Electric Motor Drive arrangement,
2. Rated Input Horse Power – minimum 1400 H. P.	1500 H.P.
3. Auxiliary Draw Works Braking System-Eddy Current Brake/ Disc Brake.	Yes, Available; Elmago Type -6032 Eddy Current Brake
4. Brake Water Cooling System – Closed Circulating Type.	Yes, Available-Closed Circulating Type.
5. Stop device (Crown-o-matic)	Yes, Available, Crown-o-matic stop device
(D) ROTARY TABLE & ACCESSORIES:	Yes, Available;
1. Rotary Table with 27 ½” opening, Dead Load Capacity 500 Tons & complete with following:	Yes, Available; MAKE: CONTINENTAL EMSCO, Model: T-2750 with 27 ½” opening, Dead Load capacity 500 Tons
i. Pin Drive Kelly Bushing complete with roller assembly for 5 ¼” & 3 ½” Hexagonal Kelly.	Yes, Available; Varco – BJ make
ii. Pin Drive Master Bushing,	Yes, Available; Varco – BJ
iii. API Insert Bowl no. 1, 2 &3.	Yes, Available; Varco – BJ
iv. Bit Breaker Adaptor Plate in case of Pin drive bushing.	Yes, Available; Varco – BJ
(E) TRAVELLING – HOOK BLOCK	Yes, Available; Traveling Block: Continental EMSCO; Model: RA-52-6 Hook: MAKE –BJ; Model: DYNAPLEX 5500
1. Capacity – 500 Tons	500 Tons

2. Wire line suitable to rig system.	1- 3/8"
(F) SWIVEL:	Yes Available, NATIONAL
1. Dead Load Rating	450 Tons
2. API Bearing Rating	335 Tons
3. Continuous Working Pressure – 5000 PSI.	5000 psi
(G) ELECTRICAL PORTABLE TOP DRIVE:	Yes Available; TESCO Make, Model: ECI 900 HP
Hook Load Capacity 500 Tons.	500 Tons
Power:- A.C. Motor of suitable rating, non-sparking,	Yes, Available; Two Numbers of Electric A/C Motor of suitable rating (450 HP each), non-sparking flameproof and suitable for hazardous locations.
Cooling System: - Motor Cooling System to operate with ambient temperature of 45 Degree. Centigrade.	Yes, Available; Force air Motor Cooling System to operate at ambient temperature of 45 degree centigrade.
Torque Requirement: - Maximum Continuous Torque – Not Less Than 30,000 ft-lbs. At 100 RPM.	Yes, Available; Maximum Continuous Torque- 37,000 ft-lbs at 100 RPM.
Maximum Torque at maximum speed – Not Less Than 17,000 ft-lbs.	Not Less Than 17,000 ft – lbs (75,000 lbs ft @200 psi)
RPM range – 0-200 (Minimum) 0-190 is also acceptable.	RPM range – 0-228
Break – out Torque – 50,000 ft-lbs. (Minimum)	Break-out Torque-55, 000 ft-lbs
(H) MUD PUMPS:	Yes, Available; Two numbers; Make: Weatherford Model: MP-16, 1600 HP
1. Two nos. Triplex Single Acting Slush pumps driven by D.C. / A.C. motors, I.H.P. 1400, maximum working pressure 5000 psi & complete with all accessories.	Yes, Available, Two nos. Triplex Single Acting Slush pumps driven by D.C. motors, I.H.P. 1600, maximum working pressure 5000 psi & complete with all accessories. Make: Weatherford, Model: MP-16
2. Motor driven centrifugal Supercharging pumps compatible to Mud Pumps	Yes, Available; NOV Make, Model: Mission- 2500, Supreme.
(I) POWER SYSTEM:	

Diesel Electric, AC-SCR system complete with following:	Yes, Available
1. Engines (4 nos) of suitable rating	Yes, Available; 4 Nos. Caterpillar D-398 Turbocharged, total minimum H.P. – 4,800 (app.).
2. AC Generators of suitable ratings – 60 Hzs.	Yes, Available; Make: KATO, 4 Nos. AC Generators – 60 Hzs
3. DC Motors with 1,000 H.P. continuous rating	Yes, Available; 6 Nos. of GE make model 752 DC Electric Motors, 1000 HP each continuous rating and 1250 intermittent rating
4. Suitable SCR System of reputed make.	Yes, Available; Make: ROSS HILL, Model: 1650 4 Bay SCR System
5. Explosion proof Lighting system suitable for Hazardous locations with adequate lighting at all important points.	Yes, Available; Explosion proof Lighting system suitable for Hazardous locations with adequate lighting at all important points.
(J). Rig Air Compressor package consisting of following:	Yes, Available; IR Make,
(a) Electric motor Driven Air Compressor.	Yes, Available; 1 nos. Ingersoll Rand electric motor Driven Air Compressor Model No: UP- 5-22-10 complete with all accessories.
(b) 1 no. Cold Start Compressor of capacity 30-40 c.f.m. at 150 psi working pressure driven by Diesel Engine.	Not Available
(c) 2 nos. Air receiver each having a suitable capacity complete with safety relief valve, condensate trap.	Yes, Available
(K) MUD SYSTEM	Yes, Available
Five Tanks Mud System having an active capacity of 150 M3 & Reserve Capacity of 120 M3 consisting of.	Yes, Available; Five Tanks Mud System having an active capacity of 150 M3 & reserve Capacity of 150 M3 consisting of following
(i) One Shaker Tank, Settling Tank,	Yes, Available
(ii) One Intermediate Tank,	Yes, Available
(iii) One Suction Tank &	Yes, Available
(iv) Two Reserve Tanks.	Yes, Available

The System is complete with the following:	
(a) Provision of suction of mud from any of the reserve tanks with either of the mud pump, and with suitable facilities for transfer of mud from active to reserve tank or vice versa. Suction from intermediate tank to Mud Pumps to be possible.	Yes, there is a provision of suction of mud from any of the reserve tanks with either of the mud pump, and with suitable facilities for transfer of mud from active to reverse tank or vice versa
(b) Mud Tanks complete with the adequate numbers of low pressure mud guns & mud agitators of. Slug pits should also contain mud agitator.	Yes, Mud Tanks are complete with the adequate numbers of low pressure mud guns & mud agitators Brandt make
(c) Provision of Pill / Slug Tank in Suction Tank (around 6m ³ capacity).	Yes, Available
(e) Trip Tank of 10 M ³ / 50 bbl capacity complete with two nos of 20 HP flame proof electric motors powered Centrifugal Pumps, Flow line and Valves.	Yes, Available, Trip Tank of 10 M3 capacity complete with two nos. of 20 HP flame proof electric motors powered Centrifugal Pumps, Flow line and Valves.
(f) Mud Mixing System consisting of Two low pressure Hoppers & Electric motor driven centrifugal pumps.	Yes, Available, Mud Mixing System consisting of Two low-pressure Hoppers & Electric motor-driven centrifugal pumps Harrisburg / Mission Magnum.
(g) Two Linear Motion Shale Shaker of capacity 1500 G.P.M.	Yes; Available; two numbers; Make: MI-SWACO, Model: Dual Mongoose, Linear Motion Shale Shaker of capacity 1500 G.P.M
(h) Desander capacity of 900-1100 G.P.M.	Yes, Available; Make: Brandt, Model 2-12 Desander, capacity 1000 G.P.M.
(i) Desilter capacity of 1000 G.P.M.	Yes; Available; Make: Brandt Model: 2-12/ 8T4
(j) Poor Boy (Vertical)-Mud gas separator.	Yes, Available;
(k) Vacuum Type Degaser capacity of 1200 G.P.M.	Yes, Available;

	Make : Swaco, Model: Vaccum Type Capacity of 1200 G.P.M
(1) Electric motor driven centrifugal pumps for above mud cleaning and degassing equipments.	Yes, Available; Harrisburg
(L) MISCELLANEOUS:-	
1. Water system having total capacity of 80 M3 (minimum), complete with two electric motor driven centrifugal pumps.	Yes, Available, tank water system having total capacity of 80 M3, complete with two electric motor driven centrifugal pumps of Harrisburg
2. Diesel fuel tank system having a total capacity of 50 M3 complete with fuel filters and two electric motor driven fuel pumps.	Yes, Available. Diesel fuel tank system having a total capacity of 50 M3 complete with fuel filters and two electric motor driven fuel pumps Mission Magnum
3. Dog House and Pig house.	Yes, Available
4. Two section cat-walk and pipe racks of sufficient capacity.	Yes, Available
5. Pneumatic Kelly spinner – capable of clockwise and anti clockwise rotation.	Yes, Available, Varco (Model 6600 Pneumatic Kelly spinner)
6. Storage and tool house.	Yes, Available
7. Ezy Torque.:	Yes, Available, Texas Intl Ezy-Torq hydraulic cathead.
8. Rat Hole Digger.	Not Available
9. Two nos. of Air Winch of capacity 6000 Lbs.	Yes, Available, Two Nos. Air winch of IRI make of capacity 6000 lbs
11. Dual stand pipe and mud manifold complete with rotary and vibratory hoses 5000 psi w.p.-compatible with Top Drive offered and mud swivel.	Yes, Available
(M) DRILLING INSTRUMENTATION:	
Rig is equipped with the following instruments of Martin Decker / Swaco New Generation Make i.e. Drill Watch, Mud Watch, Digital and analog display monitors at 3 rig stations with data acquisition and printing facilities for monitoring following drilling parameters:	Yes, Available, Martin Decker / MI-SWACO make, Model SG SMART. New Generation i.e. Drill Watch, Mud Watch, Touch Screen type digital and analog display monitors at 3 rig stations with data acquisition and printing facilities for

	monitoring following drilling parameters: will be provided.
1. Weight Indicator complete with accessories & suitable wire line anchor, (Martin Decker Type EB or equivalent,)	Yes, Available, Martin Decker Type EB
2. Martin Decker or equivalent Mud gauge assembly, Tong Torque assembly, Rotary RPM, Rotary Torque & Mud Pump SPM indicator,	Yes, Available; Martin Decker /
3. Mud Volume Totalizer and recording with alarm system for all the system tanks and 1 no. Trip tank,	Yes, Available; Martin Decker / Swaco
4. Mud flow fill and stroke indicating system with alarm.	Yes, Available; Martin Decker / Swaco
5. Seven channel recorder to record weight, mud pressure, rotary torque & RPM, Mud Pump SPM & rate of penetration,	Yes, Available; Martin Decker / Swaco
6. Totco or equivalent drift indicator with 0-8 deg double recorder complete with baffle plates of required sizes.	Yes, Available; Totco /Martin Decker
7. Six Point Gas Detection System with all accessories.	Not Available
8. Driller's Console: Weight Indicator, Remote mud pressure gauge, Tong Torque indicator, Rotary torque indicator, Rotary RPM, Mud pump SPM	Yes, Available, Martin Decker / Swaco make.

(N) RIG ACCESSORIES:	
I. Well Control Equipments: BOPs of American make.	Yes Available Shaffer Make.
(A) Hydraulically Controlled BOP stack 21 1/4" – 2 M w.p. consisting of following:	Not Available.
1. One double ram BOP 21 1/4" – 2 M w.p. complete with following ram assembly,	
(a) 5" O.D. Drill Pipe,	
(b) Blind,	
(c) 13 3/8" casing.	
Rig should also be equipped with one 21 1/4" 2M Annular BOP.	Not Available
(B) Hydraulically operated BOP stack 13 5/8" – 5 M w.p. consisting of following:	Yes Available, Make: Shaffer.
1. One no. double ram unit 13 5/8" – 5 M w.p.	Yes, Available, Make: Shaffer.
2. One no. Single Ram BOP 13 5/8" – 5M WP	Yes Available Make: Shaffer.
3. One no Annular BOP 13. 5/8"- 5 M	Yes, Available; One no. Annular BOP 13 5/8" –5M w.p. with base flange Make: Shaffer.
(C) Choke & Kill Manifold:	

<p>One no. choke & kill manifold 3 1/8" –5M , complete with two nos. each manually & hydraulically operated chokes including control console showing all the necessary parameters and BOP side valves (one each manually & hydraulically operated gate valve on choke line side & one each manually & hydraulically operated gate valve and one check valve on kill line side).</p>	<p>Yes, Available, one no. choke & kill manifold 3 1/8" –5M w.p., and complete with 2 nos. each manually and hydraulically operated chokes including control console showing all the necessary parameters and BOP side walls (one each manually & hydraulically operated gate valve on choke line side one each manually & hydraulically operated gate valve and one check valve on kill line side.)</p>
<p>(D) BOP control unit:</p>	
<p>BOP accumulator & control unit of Koomey / NL- Shaffer or equivalent make (API) of capacity 200 gallons with 6 functions (for Choke line, Kill line, Single Ram BOP, Annular Ram BOP and 2 more lines for Double Ram BOP) with Two nos. of Remote Control panels complete with skid mounted pipe racks to keep the control unit at about 100 ft away from the well, so as to open-close well control equipment system.</p>	<p>Yes, Available, one no. of BOP accumulator & control unit of Koomey make (API) of capacity 200 gallons with 6 functions (for Choke line, Kill line, Single Ram BOP, Annular Ram BOP and 2 more lines for Double Ram BOP) with Two nos. of Remote Control panels complete with skid mounted pipe racks to keep the control unit at about 100 ft away from the well, so as to open-close well control equipment system.</p>
<p>(E) Adaptor & Spools:</p>	
<p>(F) BOP CONTROL TESTING UNIT, 10 M WP with recorder.</p>	<p>Yes, Available, CPC make (SE series Model SE-15T with recorder STR – 1/15)</p>
<p>(G) One no. of Inside Blow Out Preventer for 5" O.D. D/P with 10 M WP.</p>	<p>Yes, Available, KELLYSEAL/ NOV make</p>
<p>II. DRILL STRING PREMIUM CLASS-RANGE-II</p>	
<p>(A) Drill Pipe : 5 " O.D.-G-105 3000 Mtrs.</p>	<p>Not Available</p>
<p>Drill Pipe: 3 1/2" O.D. - S-135-2000 Mtrs. .</p>	<p>Not Available</p>

(B) H.W.D.P. with hard facing on tool joints 5" O.D. – 21 joints	Not Available
(C) DRILL COLLARS (Spiral with elevator Zip groove & slip recess): 8" OD – 15 joints, 6 ½" OD – 30 joints, 4 ¾" OD – 18 joints.	Not Available
(D) 8" short drill collar of length 10' -12'.	Not Available
5" short drill pipe G-105 of length 5' /10' /	Not Available
(E) One lot of necessary Substitutes	Yes, Available
(F) One no. each of 5 ¼" & 3 ½" Hexagonal Kelly with following:	Yes, Available, One no. each of 5 ¼" & 3 ½" hexagonal Kelly
(i) Upper Kelly Cock, 10 M	Yes, Available -1 Each
(ii) Lower Kelly Cock, 10 M	Yes, Available -1 Each
(iii) Kelly saver Sub, 10 M	Yes, Available – 1 Each
(G) FOSV / IBOP – 10 M	
III DOWN HOLE TOOLS:	
One number of near bit & 1 nos. of string stabilizers.	
(I) 17 ½"	Not Available
(ii) 12 ¼"	Not Available
(iii) 8 ½"	Not Available
IV HANDLING TOOLS:	
(A) Elevators	
(i) 13 3/8" – 14" Spider / Elevator dressed as elevator & spider complete with all accessories and slip assemblies to handle 5", 5 ½", 7", 9 5/8" & 13 3/8" O.D. Casings.	Not Available
(ii) 1 no. 250 Tons Side door elevator for 20" casing.	Not Available
(iii) 1 no. each of centre latch elevator for following D/C: 8" D/C- 100 Tons, 6 ½" D/C – 150 Tons, 4 ¾" D/C – 65 Tons.	Yes, Available One no. each of center latch elevator for following D/C: 8" D/C – 100 Tons, 6 ½" D/C- 100 Tons, 4 ¾" D/C – 65 Tons. of Varco BJ make
(iv) 1 no. each of centre latch elevator for 5" O.D. D/P	Yes, Available One no. of center latch elevator for 5" O.D. DP – 250 Tons of Varco BJ make
(v) 1 no. each of centre latch elevator for 3 ½" O.D. D/P -200 Tons	Yes, Available, 1 no. each of center elevator for 3 ½" O.D. DP – 200 Tons
(vi) 1 no. each of centre latch elevator for 2 7/8" EU tubing – 125 Tons.	Not Available
(vii) SJ Elevator complete with swivel and suspension assembly for following sizes of casing: 13 3/8", 9 5/8", 7", 5 ½"	Yes, Available, 1 Each of SJ Elevator complete with swivel and suspension assembly for following sizes

	of casing: 13 3/8", 9 5/8", 7", 5 1/2", Varco BJ make (SJ)
(B) Hydraulic / Pneumatic Tubular handling Spinner / Tong:	
(i) One no. Hydraulic / Pneumatic Pipe Spinner for 2 7/8" to 5" Tubulars.	Yes, Available; One no. Hydraulic / Pneumatic Spinner for 2.7/8" to 5" Tubulars Gray make
(ii) Hydraulic casing tong complete with hydraulic power unit, standard accessories for 5", 5 1/2", 7", 9 5/8", 13 3/8" casing.	Yes, Available, Hydraulic casing tong complete with hydraulic power unit, standard accessories for 5", 5 1/2", 7", 9 5/8", 13 3/8" Casing, FARR make
(iii) Hydraulic tubing tong for 2 7/8" Tubings	Not Available
(C) Bit Breakers: One no. each bit breaker for 17 1/2", 12 1/4", 8 1/2" & 6" Bits.	Yes, Available
(D) Slips:	
(i) Multi segment slips for all sizes of Casing.	Yes, Available Multi segment slips for all sizes of casing, Varco BJ make
(ii) One no. of extra long rotary slip complete with inserts for 5" D/P.	Yes, Available, one no. of extra long rotary slip complete with inserts for 5" D/P, Varco BJ / Varco make (SDXL)
(iii) Medium slips complete with 3 1/2" inserts for handling 3 1/2" D/P	Yes, Available, medium slips complete with 3 1/2" inserts for handling 3 1/2" Drill Pipe, Varco BJ / Varco make (SDML)
(iv) One set of slips to handle 8", 6 1/2" & 4 3/4" D/C.	Yes, shall be provided, one set of slips to handle 8", 6 1/2", & 4 3/4" D/C, Varco BJ / Varco make (DCS).
(E) Safety Clamps:	
(i) One set of safety clamps to handle 8", 6 1/2" & 4 3/4" D/C.	Yes, Available, one set of safety clamps to handle 8", 6 1/2", 4 3/4" D/C, Varco make (MP Clamp)
(F) Elevator Links:	Yes, Available
One set of 2 3/4" X 108" weldless links of capa. 350T.,	Yes, Available, One set of 2 3/4" x 108" weldless links of capacity 350 Tons, Varco BJ make.
(G) Rotary Tong:	

One set of rotary tong of required capacity & capability to handle all Tubulars:	Yes, Available.
(i) D/P, s & D/C of all sizes.	Yes, Available, one set of rotary tong of required capacity and capability to handle D/C of all sizes and 5" O.D. D/P, Varco BJ make (SDD type)
(ii) Small size D/P, D/C & Tubings,	Yes, Available, one set of rotary tong of required capacity and capability to handle small size D/P, D/C and tubings, Varco BJ make (C type,)
(iii) 13 3/8" / 9 5/8" / 7", 5 1/2" Casings,	Yes, Available, one set of rotary tong of required capacity and capability to handle 13 3/8" / 9 5/8" / 7", 5 1/2" Casings, Varco BJ make (Extended B type & B type)
(H) Quick Release Casing Thread Protectors:	
One set consisting 2 nos. of each size of CLAMP-ON or equivalent thread protectors for above casings.	Yes, Available, one set consisting two nos. of each size of CLAMPON or equivalent thread protectors for above casing.