

**R550D-1 400ft Jack-up Rig
IADC Format**

*Version 1
08 May 2018*

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08 May 2018

Revision

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SECTION A - UNIT SPECIFICATIONS**A.1 Main Dimensions / Technical Description**

Unit name	: R-550D Jack-up
Rig type	: Self-elevating Jack-up
Unit / design / shape	: ZENTECH
Unit flag	: Bahamas
Unit classification	: ABS, A1, Self Elevating Drilling Unit
IMO Certification	: IMO Resolution A.1023(26)
Which code version	: MODU 2012 & CDS 2012
Year of construction	: 2013
Construction yard	: CHINESE YARD TBD
Light ship	: 11591.04 MT (25553.61 kips)
Displacement at loadline	: 19606.56 MT (43224.62 Kips)
Overall length of unit (Inc. Helideck)	: 97.872 m. (321 ft. 1 in.)
Overall width of unit (Inc. Anchor racks)	: 84.874 m. (278 ft. 0 in.)
Hull length	: 79.25 m. (260 ft. 0 in.)
Hull width	: 79.55 m. (261 ft. 0 in.)
Hull depth	: 8.23 m. (27 ft. 0 in.)
Number of legs/length	: 3 x 170.2 m. (558 ft. 5 in.) including Spud
Leg length available below hull	Cans : 151.95 m. (498 ft. 6 in.)
Type of leg	: Triangular Open Truss X-Braced
Leg spacing (centre to centre):	
- Transverse	: 43.28 m. (142 ft. 0 in.)
- Longitudinal	: 39.32 m. (129 ft. 0 in.)
Independent leg or matt	: Independent leg
Spud can diameter/bearing area	: 16.54 m./216.6 m. ² (54 ft. 3 in./2331.46 ft. ²)
Spud can height	: 7.96 m. (26.12 ft. 0 in.)
Spud can jetting system	: Yes
- Bottom jets	: 30 nozzles, - 8.27Mpa (1,200 psi) pressure
- Top jets	: 18 nozzles, - 8.27Mpa (1,200 psi) pressure
Cantilever or slot	: Cantilever
Skid-off	: No
Cantilever envelope:	
Reach aft, from/to	: 0 ft / 80 ft
Transverse, port/stbd	: 20 ft / 20 ft
Max cantilever load:	
- (Combined hook+rotary+setback)	: 1,572 kips at 80', 3500 kips at 55'/0'
Max rotary load	: 1,500 kips
Max setback load	: 925 kips
Fuel consumption (avg drilling)	: 26 MT/day (57.32 kips/day)
Accommodation for maximum number	: 150 persons

(See K.2.1)

A.2 Storage Capacities

Fuel	: 822.64 m ³ (5174.25 bbl)
Drilling water	: 3370.83 m ³ (21201.88 bbl)
Potable water	: 428.07 m ³ (2692.48 bbl)
Mud processing tank (see F.2)	: 57.5 m ³ (361.6 bbl)
Active liquid mud (see F.2)	: 653.84 m ³ (4112.3 bbl)
Independent oil base mud storage	: No
- Agitated	: NA
Independent base oil storage	: 208.53 m ³ (1310.99 bbl)
Independent brine storage	: 261.84 m ³ (1646.92 bbl)
- Heavy brine accepted (e.g.bromide)	: Yes
Bulk bentonite/barite (see F3)	: 4 x 48m ³ (4 x 1695.1ft ³)
Bulk cement (see F.3)	: 4 x 48m ³ (4 x 1695.1ft ³)
Sack storage	: 5,000 sacks
Pipe rack load capacity	
- Cantilever beam pipe rack	: 544 MT (1200 kips)
- Main Deck pipe rack	: 227 MT (500 kips)
Deck load capacity	
- Main deck	: 2.44 MT/m ² (500 psf)
- Main deck pipe rack	: 2.44 MT/m ² (500 psf) (between beams) 4.76 MT/m ² (975 psf) (each beams)
- Machinery deck	: 1.33 MT/m ² (272 psf)
- Mud pits Area	: 12.08 MT/m ² (2,475 psf)
- Mezzanine deck	: 1.33 MT/m ² (272 psf)
- Top of Accommodations Block	: 1.33 MT/m ² (272 psf)
- Sack Stores	: 3.66 MT/m ² (750 psf)
- Cantilever beam deck	: 1.33 MT/m ² (272 psf)
- Cantilever beam deck pipe rack	: 1.33 MT/m ² (272 psf) (between beams) 3.72 MT/m ² (762 psf) (each beams)
- Drill floor	: 2.39 MT/m ² (490 psf)
- Helideck	: 0.25 MT/m ² (45 psf)
- Lifesaving deck	: 1.00 MT/m ² (205 psf)
- Center control room top	: 0.50 MT/m ² (102 psf)
Preload capacity	: 14205.13m ³ (89347.58 bbl)
- Time to fill and dump the preload	: 7 hrs

A.3 Jack-Up Systems

A.3.1 Jacking Systems

Make/type	: TSC / SJ1000
No. of jacks or pinions	: 54
Maximum jacking load	: 8,172 MT (18,000 kips) x 3 (Normal jacking) 10,890 MT (24,000 kips) x 3 (Preload jacking)
Jacking speed	: 0.45m/min (1.5ft/min)
Rack chocks available	: Yes
- Required for field tow	: Yes
- Required for ocean tow	: Yes

A.3.2 Raw Water Systems

Pump location (water tower or leg) : Leg
 Suction distance below hull (max) : 24.4m (80 ft)

Salt water service pump:

- Quantity : 3
 - Make/type : RITZ / Submersible
 - Capacity : 500m³/h
 - @ pressure : 6 bar
 Horsepower : 120 KW

Dedicated preload pumps:

- Quantity : 1
 - Make/type : RITZ / Submersible
 - Capacity : 1025m³/h
 - @ pressure : 3.5 bar
 Horsepower : 160 KW

A.4 Operational Capabilities

Max designed water depth capability : **121.92m (400ft)**
 Outfitted max/min water depth capability : 121.92m(400ft)/4.75m(15.6ft)(minimum water depth to be able to get into a location)
 Normal min water depth capability : 5.75m (18.90ft)
 Draft at loadline (deepest) : 5.67m (18.60ft)
 Drilling depth capability (rated) : **30,000ft**
 Transit speed towed (historical average) : 5knots
 Leg (spud can) below hull in transit : 2.46m (8ft)
 Max leg length permitted in tow:
 - Ocean tow : 116.50m (382.2ft)
 - Field tow : 170.22m (558.45ft)
 Number of tugs for field tow : 1
 Associated min bollard pull per tug : 1 Tugs 100MT / 2 Tugs 75MT Bollard pull each
 Maximum preload reaction per leg : 9979MT (22,000kips)
 Bearing pressure at max preload : 44.5MT/m² (9114psf)

A.5 Variable Load Capacity (VI)

Transit VL capacity : 2600 MT (5732 Kips)
 Drilling VL capacity (Includes drilling loads) : 4285 MT (9447 Kips)
 Jacking VL capacity : 2600 MT (5732 Kips)
 Survival VL capacity : 2924 MT (6446 Kips)

A.6 Environmental Limits

Transit:

- Max. wind velocity : Field Transit-70 knots (558.45ft. Leg, 8.0 ft. TOC)
: Ocean Transit-100 knots (382.2ft. Leg, 8.0 ft. TOC)
- Max. pitch (double amplitude) : 6 deg @ 10Sec 15 deg@ 10 Sec
- Max. roll (double amplitude) : 6 deg @ 10Sec 15 deg@ 10 Sec

OPERATIONAL CONDITIONS –ELEVATED

<i>Typical Area, Season</i>		<i>GoM Year Round</i>			
Leg length	ft (m)	558.45(170.22)	558.45(170.22)	558.45(170.22)	558.45(170.22)
Water depth	ft (m)	300(91.44)	328(99.97)	350(106.68)	400(121.92)
Air gap	ft (m)	65(19.81)	65(19.81)	65(19.81)	50(15.24)
Wave height	ft (m)	40(12.19)	40(12.19)	40(12.19)	40(12.19)
Period	sec	14	14	14	14
Surface current	Knots(m-kt)	1.5(0.77)	1.5(0.77)	1.5(0.77)	1.5(0.77)
Bottom current	Knots(m/sec)	0	0	0	0
Wind velocity(1min)	Knots(m/sec)	70(36.01)	70(36.01)	70(36.01)	70(36.01)
Leg penetration	ft (m)	25(7.62)	25(7.62)	25(7.62)	25(7.62)

Total Variable Deck Load (Include Combined Drilling Load)	Kips(mt)	9,183 (4,165)	9,183 (4,165)	9,183 (4,165)	9,183 (4,165)
Cantilever combined load@ 55' Reach	Kips(mt)	3,500(1,588)	3,500(1,588)	3,500(1,588)	3,500(1,588)
Reach aft from stern	ft (m)	80(24.38)	80(24.38)	80(24.38)	80(24.38)
Reach at either side of CL	ft (m)	20(6.10)	20(6.10)	20(6.10)	20(6.10)

SURVIVAL CONDITIONS –ELEVATED

<i>Typical Area, Season</i>		<i>GoM Year Round</i>			
Leg length	ft (m)	558.45(170.22)	558.45(170.22)	558.45(170.22)	558.45(170.22)
Water depth	ft (m)	300(91.44)	328(99.97)	350(106.68)	400(121.92)
Air gap	ft (m)	65(19.81)	65(19.81)	65(19.81)	50(15.24)
Wave height	ft (m)	72(21.95)	72(21.95)	65(19.81)	60(18.29)
Period	sec	15	15	15	15
Surface current	Knots(m/sec)	1.5(0.77)	1.5(0.77)	1.5(0.77)	1.5(0.77)
Bottom current	Knots(m/sec)	0	0	0	0
Wind velocity(1min)	Knots(m/sec)	100(51.4)	100(51.4)	100(51.4)	100(51.4)
Leg penetration	ft (m)	25(7.62)	25(7.62)	25(7.62)	25(7.62)
Total storm variable load capacity	Kips(mt)	6,183(2,804)	6,183(2,804)	6,183(2,804)	6,183(2,804)

TRANSIT CONDITIONS–AFLOAT

<i>Transit Condition</i>	<i>Field Tow</i>	<i>Ocean</i>
Variable load	2,721.55MT(6,000 kips)	2,721.55MT(6,000 kips)
Leg Length	170.22 m.(558.45ft)	116.50m(382.2ft)
Draft hull approx	5.67m(18.60ft)	5.67m(18.60ft)
Max roll or pitch motion each side	6deg	15deg
Full cycle period	10sec	10sec

A.7 Mooring System**A.7.1 Anchor Winches**

Quantity	: 4
Make/model	: SOE-MW-1D-H-040
Type (electric/hydraulic/diesel)	: Electric with high and low speed
Total HP per winch	: 47 KW / 67 KW
Rated pull	: 40MT (the first layer, 6m/min) 16MT (the second layer, 12m/min)
Control locations (local/remote/both)	: Local

A.7.2 Anchors

Quantity	: 4
Make/type	: Delta Flipper
Weight	: 7.5 MT

A.7.3 Anchor Lines

Wire	
- Quantity (installed + spare)	: 4
- Make / type	: 6*36 IWRC
- Construction	: EIPS
- Diameter	: 52mm
- Useful length (nominal)	: 914m

A.7.4 Towing Gear

Towing bridle size	: dia. 52mm
Hook-up system	: SMIT Clip and Towing Chain
Rating	: 150MT
Spare bridle	: Yes

A.7.5 Supply Vessel Mooring System (Owner furnished equipment)

System description	
Rating	
Location (port/stbd/both)	

A.8 Marine Loading Hoses

Location of loading manifolds	(port/stbd/both)	: Both
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A.8.1 Potable Water Hoses

Quantity	: 4 x 90 ft (27.4m) Segments
Size	: 4 x 3"
Make/type	: CONTICETH
Color coding	: Yes
Make/type/connection	: 2 x 3" Fig.200 Female Sub NPT x 3" Fig.200 Male Sub NPT, 2 x 3" Fig.200 Male Sub NPT x 3" Female CAMLOCK

A.8.2 Drilling Water Hose

Quantity : 4 x 90 ft (27.4m) Segments
 Size in. : 4 x 4"
 Make/type : CONTICETH
 Color Coding : Yes
 Make/type/connection : 2 x 4" Fig.200 Female Sub NPT x 6" Fig.200 Male Sub NPT, 2 x 4" Fig.200 Male Sub NPT x 6" Female CAMLOCK

A.8.3 Fuel Oil Hose

Quantity : 4 x 90 ft (27.4m) Segments
 Size : 4 x 3"
 Make/type : CONTICETH
 Color Coding : Yes
 Make/type/connection : 4 x 3" Fig. 200 Female Sub NPT x 3" Fig. 200 Male Sub NPT

A.8.4 Mud Chemical Hoses

Quantity : 4 x 90 ft (27.4m) Segments
 Size : 4 x 5"
 Make/type : CONTICETH
 Color Coding : Yes
 Make/type connection : 2 x 5" Fig.200 Female Sub NPT x 5" Fig.200 Male Sub NPT, 2 x 5" Fig.200 Male Sub NPT x 5" Female CAMLOCK

A.8.5 Cement Hose

Quantity : 4 x 90 ft (27.4m) Segments
 Size : 4 x 5"
 Make/type : CONTICETH
 Color Coding : Yes
 Make/type connection : 2 x 5" Fig.200 Female Sub NPT x 5" Fig.200 Male Sub NPT, 2 x 5" Fig.200 Male Sub NPT x 5" Female CAMLOCK

A.8.6 Base Oil Hose

Quantity : 4 x 90 ft (27.4m) Segments
 Size : 4 x 3"
 Make/type : CONTICETH
 Color Coding : Yes
 Make/type connection : 4 x 3" Fig. 200 Female Sub NPT x 3" Fig. 200 Male Sub NPT

A.8.7 Brine Hose

Quantity : 4 X 90 ft (27.4m) Segments
 Size : 4 x 3"
 Make/type : CONTICETH
 Color Coding : Yes
 Make/type connection : 4 x 3" Fig. 200 Female Sub NPT x 3" Fig. 200 Male Sub NPT

A.8.8 Other

Use	: Sanitary Drainage System
Quantity	: 2 x 90 ft (27.4m) Segments
Size	: 2 x 3"
Make/type	: CONTICETH
Color coding	: Yes
Make/type connection	: 1 x 3" Marpol Flange x 3" Fig.200 Female Sub NPT, 1 x 3" Fig.200 Male Sub NPT x 3" Marpol Flange
Use	: Fire Water System
Quantity	: 4 x 90 ft (27.4m) Segments
Size	: 4 x 2-1/2"
Make/type	: CONTICETH
Color coding	: Yes
Make/type connection	: 2 x 2-1/2" International Shore Connection x 2-1/2" Fig.200 Female Sub NPT, 2 x 2-1/2" Fig.200 Male Sub NPT x 2-1/2" International Shore Connection
Use	: Dirty Oil System
Quantity	: 4 x 90 ft (27.4m) Segments
Size	: 4 x 1-1/2"
Make/type	: CONTICETH
Color coding	: Yes
Make/type connection	: 2 x 1-1/2" Marpol Flange x 1-1/2" Fig.200 Female Sub NPT, 2 x 1-1/2" Fig.200 Male Sub NPT x 1-1/2" Marpol Flange
Use	: Low Pressure Mud Mixing & Transfer System
Quantity	: 4 x 90 ft (27.4m) Segments
Size	: 4 x 6"
Make/type	: CONTICETH
Color coding	: Yes
Make/type connection	: 4 x 6" Fig. 200 Female Sub NPT x 6" Fig. 200 Male Sub NPT

A.9 Cranes, Hoist and Material Handling**A.9.1 Cranes Revolving**

TSC Offshore Model 162-200 VE and Model 198-200 VE kingpost cranes are designed and manufactured in accordance with API Specification 2C, 7th Edition dated March, 2012.

Quantity	: 2 x 198-200 VE + 1 x 162-200 VE
Specification (API etc)	: API 2C Monogram – Section 7C
Make	: TSC
Type	: Kingpost crane 70MT(77st) x 2, 50MT(55st) x 1
Location (fwd/aft/port/stbd)	: stbd/aft/port
Boom length	: 120 ft
Hook reach below main deck (Block/whip)	: 117 ft
Block capacities and hoisting speeds:	
- Load/radius/speed (min radius)	: 198-200 VE (70MT) CRANE, 77.16st/30ft/0.66ft/sec (on board),

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	51.94st/30ft/0.66ft/sec (off board)
	162-200 VE (50MT) CRANE, 55.11st/30ft/0.66ft/sec (on board), 38.61st/30ft/0.66ft/sec (off board)
- Load/radius/speed (max radius)	: 198-200 VE (70MT) CRANE, 22.15st/125.5ft/0.98ft/sec(on board), 13.87st/125.5ft/0.98ft/sec(off board)
	162-200 VE (50MT) CRANE, 11.02 st/124.9ft/0.98ft/sec(on board), 7.71 st/124.9ft/0.98ft/sec(off board)
Whip capacity and hoist speed	: 198-200 VE (70MT) CRANE, Max+ Min radius 11st (on or off board) , 3.28ft/sec (on or off board)
	162-200 VE (50MT) CRANE, Max radius 8.6st (on board), 5.0st (off board), 3.28ft/sec (on or off board), Min radius 11st (on or off board), 3.28ft/sec (on or off board)
Hook load indicator automatically corrected for boom angle	: Yes
alarm (audible, visual, both)	: Both
Automatic brake	: Yes
Safety latch on hooks	: Yes
Crown saver (limit switch)	: Yes
Boom illumination	: Yes

A.9.2 Forklifts

Quantity	: 1
Make/type	: HYUNDAU/Electrical
Rated capacity	: 2.5 MT
Explosion proof	: No

A.9.3 Monorail/Trolley Beam Overhead Cranes

Quantity	: 30
Make	: NingBo KaiRong
Type	: Manual
Rated capacity	:(2MTx10,10MTx7),(6MTx6,12MTx1),(2MTx2),(1 0MTx1), (5MTx1), (5MTx2)
Location(s)	: Engine room, Mud pump room, Weld workshop, Heavy tool room, Cantilever, Drill floor

A.9.4 Air Hoists / Derrick Winches

A.9.4.1 Finger Board Work Winch

Quantity	: 3
Make	: INGERSOLL RAND (IR)
Type	: LS2-600R-PH5M-MQZ-CE
Rated capacity	: 1322.77lbs (600kg)
Wire diameter	: 5/16" (8.0mm)
Automatic brakes	: Yes
Overload protection	: Yes

A.9.4.2 Casing Board Work Winch

Quantity	: 1
Make	: INGERSOLL RAND (IR)
Type	: LS2-600R-PH5M-MQZ-CE
Rated capacity	: 1322.77lbs (600kg)
Wire diameter	: 5/16" (8.0mm)
Automatic brakes	: Yes
Overload protection	: Yes

A.9.4.3 Rig Floor "Man-Riding" Winch (Utility)

Quantity	: 1ea on drill floor, 1ea on BOP deck
Make	: INGERSOLL RAND (IR)
Type	: IR FA150KGi-MR12A1-H-CE
Rated capacity	: 330.70lbs (150kg)
Wire diameter	: 3/8" (10.00mm)
Non-twisted wire	: Yes
Automatic brakes	: Yes
Overload protection	: Yes
Automatic spooling	: No
Certified for man-riding	: Yes

A.9.4.4 Utility Winch (ie Deck Winch)

Quantity	: 2ea for drill floor,4ea for BOP deck
Make	: Ansell Jones
Type	: Right Hand
Rated capacity	: 11.25kips (50KN) on top layer
Wire diameter	: 3/4" (19 mm)
Automatic brakes	: Yes
Overload protection	: No
Automatic spooling	: No
Certified for man-riding	: No
Locations	: Drill floor & BOP Deck

A.9.4.5 BOP Hoists (see E.10.1 detail) : 2 x 220.5 kips (100 MT) TSC

A.9.5 Transfer Baskets/Containers**A.9.5.1 Personnel Transfer Baskets****(Not provided)**

Quantity	:
Make/type	:

A.9.5.2 Cargo Containers**(Not provided)**

Quantity	:
Make/type	:

A.10 Helicopter Landing Deck

Location (fwd/aft/port/stbd)	: Fwd
Dimensions	: 22.2 m (Aluminum)
Perimeter safety net	: Yes
Deck Load capacity	: 0.25 MT/m ²
Maximum helicopter weight	: 12.6 MT
Designed for helicopter type	: S61N, S92A
Tie down points	: 18
Covered by foam fire system (see L.3.6)	: Cover

A.10.1 Helicopter Refueling System

System make/type	: Wilmax Engineering Pte Ltd
Fuel storage capacity	: 2 x 740 US gal (2801.2 L.)
Jettisonable	: Yes
Fuel transport containers	: 2
Volume	: 740 US gal (2801.2 L.)
Covered by foam fire system (see L.3.6)	: Yes

A.11 Auxiliary Equipment**A.11.1 Water Maker**

Quantity	: 2
Make/type	: HANSUN/ HRSO-50B
Capacity (each/total)	: 50m ³ /day (each)

A.11.2 Boilers

Quantity	: NA
Make/type	: NA
Capacity (total system)	: NA

A.11.3 Air Conditioning

Make/type	: H&H
Capacity (total system)	: 295 tons
Max temperature rating	: +45°C

A.11.4 Electric Welding Sets

Quantity	: 2
Current capacity	: 400 amp
Make/model	: KAIERDA
- Type (Fixed/Portable)	: Fixed

A.11.5 High Pressure Cleaner

(Not provided)

Quantity

Make/type

Electronic/pneumatic/diesel

Max delivered pressure

- With steam

SECTION B - GENERAL RIG SPECIFICATIONS**B.1 Derrick and Substructure****B.1.1 Derrick/Mast**

Make/type	: TSC/Bolted Type
Rated for wind speed	
- With full set back	: 81 knots
- With no set back	: 116 knots
Height	: 160 ft
Dimensions of base	: 45 ft x 40 ft
Dimension of crown	: 18 ft x 18 ft
Gross nominal capacity	: 2,000,000 lbs
Static hook load	: 1,500,000 lbs
Maximum number of lines	: 14
Ladders with safety cages and rests	: Yes
Platform for crown sheaves access	: Yes
Counter balance, system for rig tongs	: Yes
pipe spinning tong	: No
Lighting system explosion proof	: Yes

B.1.2 Racking Platform

Make/type	: TSC
Total current simultaneous capacity-drill pipe	: See below

R II Pipes:	No. of stand
57/8" DP	: 180+110(triple)
Up to 5 7/8" HWDP	: 24(triple)
Up to 6 1/2" DC	: 9(triple)
8 1/2" DC	: 6(triple)
9 1/2" DC	: 4(triple)
Total pipe stands	: 333(triple)

R III Casings:

7"	: 72 (double)
or 9-5/8"	: 64 (double)

B.1.3 Automatic Pipe Handling

Make/type	: TSC / Pipe handling system
Description	: System Consist of Horizontal Pipe Handling Crane, Catwalk Machine, Dual Mousehole, Iron Roughneck, Vertical Pipe Handling System (Guardian Racker). Horizontal Pipe Handling Crane is used to transport drill pipe from cantilever pipe stack to Catwalk. Guardian Racker can transport drill pipe from Catwalk to Mousehole, 1 stand from Mousehole to Fingerboard, from Fingerboard to Wellhead. Meanwhile it guides stand build up at Mousehole and make up at

wellhead. One Iron Roughneck is used to build up stand at mouse hole, another one is used to make up drill string at wellhead

B.1.4 Casing Stabbing Board

Make/type : TSC / Vertical Rail Type
 Adjustable from/to height above rotary ft / ft : Vertical Travel designed for manually assisting stabbing operations & maintenance equipment in Derrick approx 0-110 ft

B.1.5 Substructure

Make/type : HPWS
 Drill floor height (above main deck) : 50ft
 Length : 54ft
 Width : 77ft
 Setback capacity : 925 kips
 Simultaneous setback-hook load capacity : 3,500 lbs
 Clear height below Rotary table beams (To main deck) : 43ft-2in

B.1.6 Weather Proofing

Rig floor windbreaks : Yes
 Derrick man windbreaks : Yes
 Around process pits : No

B.1.7 CCTV Camera System

Make/type : TSC/Ex-proof type and Non Ex-proof type
 Camera located at : 3ea at Finger Board and 1ea at V door 1 x below water table, 1 x shale shaker area, 1 x BOP area, 1 x mud pump room, 2 x guardian racker ()
 Zoom/pan/tilt-function : Yes
 Monitor located at : Driller's Cabin Room

B.2 Drawworks and Associated Equipment

B.2.1 Drawworks

Make/type : TSC/D4600 VFD
 Motors make/type : GE/ B22
 - Quantity : 4
 Rated input power : 4 x 1150 hp
 Drum size (diameter & length) : 43 in x 76.6 in
 Drum type (grooved/smooth) : Grooved
 - For drill line size : 1-3/4 in
 Brake type (disk/drum) : Disk
 Max line pull (14 lines) : 124.32kips (553KN) Fast line
 Makeup cathead type : No makeup/breakout function on drawworks –
 Breakout cathead type : See D.2.17 for independent Cathead

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Crown block safety devices : Yes
 - Make/type : TSC (encoder on Drawworks, proximity on derrick, and bumper wood and rubber beneath water table beam)

Independent water cooling system for drawworks and electric brake : NA
 Automatic driller : Yes
 Make/type : TSC/Main motor driven (no model number)

B.2.2 Auxiliary Brake

Make : NA
 Model : NA
 Independent back-up system type : NA

B.2.3 Sand line (Not provided)

Make
 Length capacity
 Line size/type
 Breaking strength
 Safe working load

B.2.4 Slick line Unit/Wire Line Unit (Not provided)

Make/model
 Wire length (nominal)
 Wire size
 Breaking strength
 Safe working load
 Depth counter
 Pull indicator

B.3 Derrick Hoisting Equipment

B.3.1 Crown Block

Make/type : TSC/CB680
 Rated capacity : 750 ST
 No. of sheaves : 8(Cluster Sheaves) + 1(Fast Line Sheave) + 1(Dead Line Sheave)
 Sheave diameter : 60 in.
 Sheave grooved for line size : 1-3/4 in.

B.3.2 Traveling Block

Make/type : Canrig/B-7-60-750-1.75 (750T,W/BECKETT,1-3/4,CRE)
 Rated capacity : 750 st
 No. of sheaves : 7
 Sheave diameter : 60 in.
 Sheave grooved for line size : 1-3/4 in.

B.3.3	Hook	(Not provided)
	Make/type	
	Rated capacity	
	Complete with spring assembly/hook	
	Locking device	
B.3.4	Swivel	(Not provided)
	Make/type	
	Rated capacity	
	Test/working pressure	
	Gooseneck and wash pipe min ID	
	Left hand pin connection type	
	Access fitting for wire line entry on top of gooseneck	
B.3.5	Drilling Line	
	Diameter	: 1-3/4 in.
	Construction	: 6×26WS IWRC EEIPS,
	Length (original)	: 7500 ft
B.3.6	Drilling line reel:	
	- Drum cover	: Yes
	- Drilling line drum power driven	: Air driven
	Spare drilling line	: Yes
	- Location (rig ,shore, etc)	: Drill floor roof
	Roller guides	: No
B.3.7	Dead Line Anchor	
	Make/type	: American Block/160Kips
	Weight sensor	: Load Cell included
	Dead line dampener	: No
B.3.8	Top drive dolly	
	Make/type	: TSC/ TRD681-B
	Retractable	: Yes
B.4	Rotating System	
B.4.1	Rotating Table	
	Make / type	: TSC/RT 495H hydraulic type
	Maximum opening	: 49-1/2 in.
	Rated capacity	: 1,000st static capacity 750st dynamic capacity
	Two speed gearbox	: No

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Emergency chain drive	: No
Driven by an independent electric motor	: NA
- Electric motor make/type	: NA
- Output power	: NA
Maximum continuous torque	: 35,000lb-ft@6rpm@3000psi
Max. Speed	: 20rpm
Drip pan/mud collection system	: No

B.4.2 Master Bushings

Make/type	: TSC/ MPCH6001-1 & CB10187 & CB11763
Inserts bowls	: 2-3/8" ~ 8-5/8" 9-5/8" ~ 10-3/4" 11-3/4" ~ 13-3/8"

B.4.3 Kelly Bushing

(Not provided)

Make/type	
Lock down assembly	

B.4.4 Top Drive

Make	: Canrig
Type (electric/hydraulic)	: Electric (VFD)
Rated capacity	: 750st (680MT)
Test/working pressure	: 7,500 psi
Output power	: GEB 20AC,1,150hp
Maximum continuous torque	: 51400 ft/lbs@120rpm
Two speed gear box	: NA
Maximum rotary speed	: 265 rpm
Remote operated kelly cock	: No
Cooling system type	: Local blower
Low well control valve (see also D.1.15)	
Quill connection	: 7-5/8" Reg

B.4.4.1 Top Drive Makeup/Breakout System

Make/Type	: Canrig
Model	: 1275AC-681
Max. makeup torque	: 95000 ft/lbs
Max. breakup torque	: 95000 ft/lbs
Raised backup system	: Yes
- Make/type:	: Canrig
- Working height (range)	: max 43.25 in.

SECTION C–POWER SUPPLY SYSTEMS**C.1 Rig Power Plant****C.1.1 Diesel Engines**

Quantity	: 5
Make/type	: CAT C175-16
Maximum continuous power	: 1930 Bkw
At rotation speed of	: 1200 rpm
Equipped with spark arrestors	: Yes
Mufflers installed	: Yes
CAT emcp control panel	: Yes

C.1.2 DC – Generator**(Not provided)**

Quantity	
Make/type	
Continuous power	
- At rotation speed of	
Output volts	

C.1.3 AC – Generator

Quantity	: 5
Make/type	: KATO 6P6-3300
Continuous power	: 1,833kw
- At rotation speed of	: 1,200rpm
Output volts	: 690volts

C.1.4 VFD System

Number of VFD	: 1set
Number of Inverter	6
Make/type	: SIEMENS SINAMICS S120
Maximum continuous power (total)	: 1000kw
Output volts	: 660volts
Driving device	: Mud pump
Number of Inverter	4
Make/type	: SIEMENS SINAMICS S120
Maximum continuous power (total)	: 1000kw
Output volts	: 660volts
Driving device	: Drawworks
Number of Inverter	1
Make/type	: SIEMENS SINAMICS S120

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Maximum continuous power (total)	: 1200kw
Output volts	: 660volts
Driving device	: Top drive
Number of Inverter	3
Make/type	: SIEMENS SINAMICS S120
Maximum continuous power (total)	: 1200kw
Output volts	: 660volts
Driving device	: Jacking motor

C.1.5 Transformer System

Quantity	: 2
Make/type	: Haitian
Continuous power (each)	: 4500kva
Input voltage	: 690
Output volts	: 690volts x 2
Frequency	: 60HZ

Quantity	: 2
Make/type	: Haitian
Continuous power (each)	: 2250kva
Input voltage	: 690
Output volts	: 480volts
Frequency	: 60HZ

Quantity	: 2
Make/type	: Haitian
Continuous power (each)	: 400kva
Input voltage	: 480
Output volts	: 230volts
Frequency	: 60HZ

Quantity	: 1
Make/type	: Haitian
Continuous power (each)	: 150kva
Input voltage	: 480
Output volts	: 230volts
Frequency	: 60HZ

C.1.6 Switchboard

690V Switchboard	
Make/type	: TSC/Schneider
480V Switchboard	: Yes
480V Emergency Switchboard	: Yes

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480V MCC	: Yes
480V Emergency MCC	: Yes
230V Switchboard	: Yes
230V Emergency Switchboard	: Yes
Shore Power Connection Box	: Yes
PMS	: Yes

C.1.7 Emergency Shutdown

Emergency shutdown switches for the Complete power system (AC and VFD), located at the following points : ESD provided at DCR, Tool pusher RM, Radio RM, Lifeboat Station @ Port/Stbd, Main Deck Machinery Space Exit @ Port/Stbd.

C.1.8 Compressed Air Systems

Air Compressors - Cold Start . (Not provided)

- Make
- Model
- Rated capacity
- Working pressure
- Prime mover (electric/diesel)
- Continuous power

Air Compressors - Medium Pressure (rig air)

- Quantity : 3
- Make : Ingersoll rand
- Model : R90-W10
- Rated capacity : 841 m³/h
- Working pressure : 10bar
- Prime mover (electric/diesel) : Electric
- Continuous power : 90kw

Air dryers:

- Quantity : 1
- Make : Ingersoll rand
- Rated capacity : 3090 m³/h

Air Compressors - Low Pressure (bulk air):

- Quantity : 1
- Make : Ingersoll rand
- Model : MK90-wc
- Rated capacity : 1308 m³/h
- Working pressure : 5.5bar
- Prime mover (electric/diesel) : Electric
- Continuous power : 90KW

Air Dryers:

- Quantity : 1
- Make/type : Ingersoll rand
- Rated capacity : 1590 m³/H

C.1.9 Air Receivers

Volume (total) : 1.0m³ x 2set
 Pressure : 10bar
 Function : Air starting
 Location : Engine room

Volume (total) : 2.5m³ x 2set
 Pressure : 10bar
 Function : Service air
 Location : Aux. pump room

Volume (total) : 3m³ x 1set
 Pressure : 10bar
 Function : Rig air
 Location : Drill floor

Volume (total) : 2.83m³ x 1set
 Pressure : 6bar
 Function : Bulk air
 Location : Main deck

C.2 Emergency Generator**C.2.1 Engine**

Quantity : 1
 Make/Type : CAT-3512C
 Maximum output : 1101 BKW
 - At rotation speed : 1,200 rpm
 Automatic starting : Yes
 Starting methods (air, hydraulic, battery) : Battery
 Max angle of operation degrees : 15

C.2.2 AC - Generator

Quantity : 1
 Make/Type : KATO 6P6-2150
 Maximum output : 970kw
 - At rotation speed : 1,200rpm
 Output : 480volts
 Capable of back-feeding power to main bus : No

SECTION D–DRILLSTRING EQUIPMENT(OWNER FURNISHED EQUIPMENT WHERE NOT MENTIONED)**D.1 Tubulars****D.1.1 Kellys**

Quantity :

Nominal size OD :

Shape type(hexagonal, square or triangular) :

Total/Working Length :

Connection type :

D.1.2 Kelly Saver Subs

Quantity :

Nominal kelly size :

Connection type :

Protector : yes/no

D.1.3 Drill Pipe (OFE)

Drill pipe OD :

Grade :

Total length :

Range :

Weight :

Internally plastic coated : yes/no

Tool joint OD/ID :

Tool joint pin length(original) :

Tapered shoulder tool joints (Box/pins) Degree/degree :

Connection type :

Type of hardfacing :

API classification :

Thread protectors : yes/no

D.1.4 Drill Pipe Pup Joints

Drill Pipe Size :

Tool joint OD/ID :

Grade :

Length :

Quantity :

Weight :

Connection type :

Internally plastic coated : yes/no

API classification :

Thread protectors : yes/no

D.1.5 Drill Pipe Casing Protectors

Initial stock :
 Make/type :
 OD :
 Installation tools (manual/hydraulic/none) :

D.1.6 Hevi-Wate Drill Pipe

Quantity :
 Nominal size OD :
 Weight :
 Range :
 Tool joint OD/ID :
 Type of hardfacing :
 Internally plastic coated : yes/no
 Connection type :
 Thread protectors : yes/no

D.1.7 Drill Collars

Quantity :
 OD body :
 ID body :
 Nominal length of each joint :
 Drill collar body (slick/spiral) :
 Recess for "zip" elevator : yes/no
 Recess for slips : yes/no
 Stress relief pin groove : yes/no
 Boreback on box : yes/no
 Connection type :

D.1.8 Short Drill Collars

Quantity :
 OD body :
 ID body :
 Nominal length of each joint :
 Stress relief pin groove : yes/no
 Boreback on box : yes/no
 Connection type :

D.1.9 Non-magnetic Drill Collars

Quantity :
 OD body :
 ID body :
 Nominal length of each joint :
 Drill collar body (slick/spiral) :
 Recess for "zip" elevator : yes/no

Recess for slips	: yes/no
Stress relief pin groove	: yes/no
Boreback on box	: yes/no
Connection type	:

D.1.10 Core Barrels

Quantity	:
Make	:
Model	:
Size OD/ID	:
Length	:
Top connection type	:
Spiral stabilizing ribs	: yes/no
Subs and handling tools	: yes/no

D.1.11 Stabilizers

Hole size	:
Quantity	:
Make	:
OD blades	:
Type blades (straight/spiral; welded/integral/sleeve)	:
Type of blade hardfacing	:
OD body or fishing neck	:
ID body	:
Connection type	:
Float valve receptacle	: yes/no

D.1.12 Rollerreamers

Hole size	:
Quantity	:
Make	:
OD body	:
ID body	:
OD fishing neck	:
Cutters, supplied sets	:
- Cutters, type	:
Connection, type	:

D.1.13 Shock Absorbers (Damping Sub)

Quantity	:
Make/type	:
OD body	:
ID body	:
OD fishing neck	:
Connection type	:

D.1.14 Drilling Jars

Quantity :
 Make :
 Type(mechanical/hydraulic; up/down) :
 OD body :
 Min.ID body :
 OD fishing neck :
 Stroke :
 Connection type :

D.1.15 Inside BOP Valve

Quantity : 1
 Make/type : CANRIG/remote actuated
 OD : 8.45"
 Min. ID : 3"
 Connection type (box) : 7-5/8" Reg
 Connection type (pin) : 7-5/8" Reg
 Working pressure : 7500psi

Quantity : 1
 Make/type : CANRIG/manual
 OD : 8.45"
 Min. ID : 3"
 Connection type (box) : 7-5/8" Reg
 Connection type (pin) : 6-5/8" Reg
 Working pressure : 7500psi

D.1.16 Fast Shut-Off Coupling

Make/type :
 Quantity :
 Size tool joint to fit :

D.1.17 Circulation Head

Quantity :
 Make/type :
 Bottom connection type :
 Top connection type :
 Wire line stripper : yes/no
 Working pressure :

D.1.18 Kelly Cocks

Upper
 - Quantity :
 - Make/type :

- Working pressure :
- Max OD body :
- Max ID body :
- Connection type :
- Lower
- Quantity :
- Make/type :
- Working pressure :
- Max OD body :
- Max ID body :
- Connection type :
- Used as full open safety valve: : yes/no

D.1.19 Circulation Subs

- Quantity :
- Make/type :
- OD body :
- Ball size :
- Dressing kits :
- Connection type :

D.1.20 Cup Type Tester

- Quantity :
- Make :
- Size :
- Test cup for casing weight :
- Connection type :

D.1.21 Plug Type Testers

- Quantity :
- Make :
- Size test plugs :
- Connection type :

D.1.22 Drop-In-Valves

- Quantity :
- For nom. OD drillpipe :
- Make/type :
- Max.OD dart :

D.1.23 Near-Bit Subs (Box-Box)

- Quantity :
- OD size :
- ID size :
- Top connection type :

Bottom connection type :
 Bored for float valve : yes/no
 - Float size :

D.1.24 Crossover Subs

Quantity :
 OD size (max/min) :
 ID size :
 Top connection size :
 - Type (pin/box) :
 Bottom connection size :
 - Type (pin/box) :

D.1.25 Drilling Bumper Subs

Quantity :
 Make :
 OD :
 Stroke :
 Connection type :

D.1.26 Hole Openers

Quantity :
 Make :
 OD :
 Connection type :

D.1.27 Undreamer

Quantity :
 Make/type :
 OD min / OD max :
 Connection type :

D.2 Handling Tools (Owner furnished equipment where not mentioned)

D.2.1 Drill Pipe Elevators

Size : 2-3/8" – 6-5/8" (5-7/8" insert is provided)
 Quantity : 1
 Make : Blohm + Voss
 Model : VES-CL 500H (hydraulic)
 Rated capacity : 500 st

D.2.2 Drill Collar Elevators

(Function replaced by VES-CL 500H elevator)

Size : 3-1/2" – 6-3/4" (No insert is provided)
 Quantity : 1
 Make : Blohm + Voss

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Model : VES-CL 500H (hydraulic)
Rated capacity : 500 st

D.2.3 Tubing Elevators (Function replaced by VES-CL 500H elevator)

Size (max/min) : 2-3/8" – 5-1/2" (No insert is provided)
Quantity : 1
Make : Blohm + Voss
Model : VES-CL 500H(hydraulic)
Rated capacity : 500 st

D.2.4 Drill Pipe Hand Slips

Size : 5-7/8"
Quantity : 1
Make / type : TSC/SDXL 5-7/8

D.2.5 Semi-Automatic DP Slips

Size range (largest/smallest) : 2-3/8" to 22"
Quantity : 1
Make/type : Blohm + Voss/PS750-2

D.2.6 Drill Collar Slips

Size : 5-1/2" – 7"
Quantity : 1
Make/type : TSC/DCS-R 5-1/2 – 7

Size : 8" – 9-1/2"
Quantity : 1
Make/type : TSC/DCS-L 8 – 9-1/2

D.2.7 Drill Collar Safety Clamps

Quantity :
Range :
Make/type :

Quantity :
Range :
Make/type :

D.2.8 Tubing Slips

Size :
Quantity :
Make/type :

D.2.9 Tubing Spider

Slip size (max/min) :

Quantity :
 Make :
 Adapter plate :

D.2.10 Drill Collar Lifting Subs

Quantity :
 For DC OD :
 Connection type :

Quantity :
 For DC OD :
 Connection type :

D.2.11 DC Lifting Plugs

Quantity :
 For DC OD :
 Connection type :

D.2.12 Bit Breakers

Quantity :
 For bit size :

Quantity :
 For bit size :

Quantity :
 For bit size :

D.2.13 Elevator Links

Quantity of sets : 1
 Make/Type : CANRIG
 Size : 4-3/4"
 Length : 180"
 Rated Capacity : 750 st

Quantity of sets :
 Make/Type :
 Size :
 Length :
 Rated Capacity :

D.2.14 Kelly Spinner

Make/Type :

D.2.15 Drillpipe Spinner

Make/Type :
Size (max/min) :

D.2.16 Mud Saver Bucket (Manual)

Make :
Size :
Return to active system : yes/no

D.2.17 Hydraulic Cathead (Hydraulic Makeup/Breakout Machine) (e.g. EZ Torque)

Make/Type : TSC
Maximum line pull : 36kips (160kN)

D.2.18 Rotary Rig Tongs

Quantity (sets) :
Make/type :
Size range(max OD/min OD) :
Torque rating :

D.2.19 Tubing Tongs (Manual)

Quantity (sets) :
Make/type :
Size range (max OD/min OD) :
Torque rating :

D.2.20 Tubing Tongs (Power)

Quantity :
Make/type :
Size range (max OD/min OD) :
Max output torque :
Torque indicator : yes/no
Back-up arm : yes/no

D.2.21 Iron Roughneck (Pedestal)

Quantity : 2
Make/type : TSC/IR150
Size range (max OD/min OD) : 9-1/2" 3-1/2"
Max makeup torque : 100,000ft/lbs
Max breakout torque : 120,000ft/lbs

D.3 Fishing Equipment (Owner furnished equipment)**D.3.1 Overshots**

Quantity :
 Make/type :
 Overshot OD :
 To catch size :
 To catch size :
 Overshot guide OD :
 Extension sub length :
 Lipped guide(oversize, regular) :
 Grapples (spiral, basket, both) :
 :
 Pack offs : yes/no

D.3.2 Top subs connection type

Quantity :
 Make/type :
 Overshot OD :
 To catch size :
 To catch size :
 To catch size :
 Overshot guide OD :
 Extension sub length :
 Lipped guide (oversize, regular) :
 Grapples (spiral, basket, both) :
 Pack offs :
 Top subs connection type :

D.3.3 Hydraulic Fishing Jar

Quantity :
 Make/type :
 OD body :
 Min. ID :
 Stroke :
 Connection type :
 Repair kit : yes/no

D.3.4 Jar Intensifier

Quantity :
 Make/type :
 OD body :
 Min. ID :
 Connection type :
 Repair kit : yes/no

D.3.5 Surface Jar

Quantity :
 Make/type :
 OD body :
 Stroke :
 Connection type :
 Repair kit : yes/no

D.3.6 Fishing Bumper Subs

Quantity :
 Make/type :
 OD body :
 Min ID :
 Stroke :
 Connection type :

D.3.7 Safety Joints

Quantity :
 Make/type :
 OD body :
 Min ID :
 Connection type :

D.3.8 Junk Baskets (Reverse Circulation)

Quantity :
 Make/type :
 For hole size :
 OD body :
 Connection type :
 Inside magnet available : yes/no
 Mill shoes type (A, B, C) :

D.3.9 Junk Subs

Quantity :
 Make/type :
 For hole size :
 OD body :
 Connection type :

D.3.10 Flat Bottom Junk Mill

Quantity :
 Make/type :
 OD flat mill :
 Connection type :

D.3.11 Magnet Fishing Tools

Quantity :
Make/type :
OD body :
Connection type :

D.3.12 Taper Taps

Quantity :
Make :
Tap OD (max/min) :
OD body :
Length overall :
Connection type :

D.3.13 Die Collars

Quantity :
Make :
OD (max/min) :
OD body :
Length :
Connection type :

SECTION E—WELL CONTROL / SUBSEA EQUIPMENT**E.1 Diverter BOP****E.1.1 DIVERTER**

Fixed type diverter:

- Quantity	: 1
- Make/type	: GE/KFDJ-500 KFDJ Big Bore
- Maximum bore	: 36.5" ID
- ID of insert packer	: (30.75"), (27.5"), (22.00"), (19.5") (15.00"), (10.00")
- Working pressure	: 500 psi

Annular type diverter: (NA)

- Quantity	
- Make/type	
- Maximum bore	
- ID of insert packer	
- Working pressure	

Bottom connection

- Size	
- Working pressure	
- Gasket type	

Spool	: Completed package
Number of diverter outlets	: 6
Outlet OD (nominal)	: 14" Flowline outlet, 12" Port overboard outlet, 12" Starboard overboard outlet, 4" Test line outlet, 4" Flooding line outlet, 4" Fill-up line outlet

E.1.2 Diverter Flowlines

Quantity	: 1
Nominal size of flowlines	: 14"
Running from diverter to	: Mud ditch
Valve make/type	: ALTON INTERNATIONAL/CL300
- Quantity	: 1
- Size	: 14"
- Working pressure	: 1,305 psi
- Valve operator (air/hydraulic)	: Hydraulic
System pressure rating	: 60 psi
Flex hose in flowline	: No

E.1.3 Diverter Control Panel

Primary make/type	: CAD Control System /Type:AD1170-3SS10K23U102
Location	: Inside Cantilever
Remote make/type	: CAD/ Electrical control
Location	: Driller's Control Room
Remote make/type	: CAD/ Electrical Control
Location	: Tool Pusher's Room

E.2 Low Pressure BOP (NA)

All appropriate components
H₂S rated

E.2.1 Ram Type Preventers

Quantity
Make/model
Type (single/double/triple)
Size
Working pressure
Ram locks
Type (manual/hydraulic)
H₂S service
Side outlets
- Size
- Working pressure
Bottom connection
Top connection
Shear ram boosters

E.2.2 Available Rams (Installed and Spare)

Quantity/type/size

E.2.3 BOP Ram Configuration (Normal)

Upper
Middle upper
Middle lower
Lower

E.2.4 Annular Preventer

Quantity
Make/type
- Size
- Working pressure
Bottom connection
Top connection

E.2.5 Kill Line Valves

Quantity
 Make/type
 Size
 Working pressure
 Gasket type
 Hydraulic/manual/non-return

E.2.6 Choke Line Valves

Quantity
 Make/type
 Size
 Working pressure
 Gasket type
 Hydraulic/manual

E.3 High Pressure BOP

All appropriate components
 H₂S rated : YES/ NACE MR-01-75

E.3.1 Ram Type Preventers

Quantity : 2
 Make/model : GE Hydril/18-3/4 in.
 Type (single/double/triple) : Two double ram
 Size : 18-3/4"
 Working pressure : 15,000 psi
 Ram locks : Yes
 Type (manual/hydraulic) : Hydraulic and Manual
 H₂S service : YES/ NACE MR-01-75
 Side outlets : 8
 Size : 3-1/16".
 Working pressure : 15,000 psi
 Bottom connection : API Flange BX 164 ring groove
 Top connection : API StuddedBX 164 ring groove

E.3.2 Available Rams (Installed & Spare)

Quantity/type/size : GX 18-10 Annual Ram
 Quantity/type/size : 1set x RAM ASSY 3-1/2 – 5-7/8" 18-15M 16A, HT
 Quantity/type/size : 1set x RAM ASSY BLIND/ SHEAR
 Quantity/type/size : 1set x RAM ASSY 4-1/2 – 7" 18-15M 16A, HT
 Quantity/type/size : 1set x RAM ASSY 5-7/8" HVR18-15M 16A, HT
 Quantity/type/size : 1set x RAM ASSY 4-1/2" HVR18-15M 16A, HT
 Quantity/type/size : 1set x RAM ASSY 5" 18-15M 16A, HT
 Quantity/type/size : 1set x RAM ASSY 5-1/2" 18-15M 16A, HT

E.3.3 BOP Ram Configuration (Normal)

Upper	: Annular
Upper Middle	: 3-1/2" ~5-7/8" VBR
Middle	: Shear Ram
Middle Lower	: 4-1/2"~ 7" VBR
Lower	: 5-7/8" DP ram

E.3.4 Annular Preventer

Quantity	: 1
Make/type	: GX 18-10
Size	: 18-3/4"
Working pressure	: 10,000psi
Bottom connection	: API Flange BX 164 ring groove
Top connection	: API Studded BX 164 ring groove

E.3.5 Kill Line Valves

Quantity	: 4
Make/type	: GE Hydril
Size	: 3-1/16"
Working pressure	: 15,000 psi
Gasket type	: API BX -154
Hydraulic/manual/non-return	: Hydraulic& manual

E.3.6 Choke Line Valves

Quantity	: 4
Make/type	: GE Hydril
Size	: 3-1/16"
Working pressure	: 15,000 psi
Gasket type	: API BX -154
Hydraulic/manual/non-return	: Hydraulic& manual

E.4 Other Blowout Preventers (NA)

All appropriate components
H₂S rated

E.4.1 Ram Type Preventers

Quantity
Make/model
Type (single/double/triple)
Size
Working pressure
Ram locks

Type (manual/hydraulic)
H₂S service
Side outlets
Size
Working pressure
Bottom connection
Top connection
Shear ram boosters

E.4.2 Available Rams (Installed & Spare)

Quantity/type/size

E.4.3 BOP Ram Configuration (Normal)

Upper
Upper Middle
Middle
Middle lower
Lower

E.4.4 Annular Preventer

Quantity
Make/type
Size
Working pressure
Bottom connection
Top connection

E.4.5 Kill Line Valves

Quantity
Make/type
Size
Working pressure
Gasket type
Hydraulic/manual/non-return

E.4.6 Choke Line Valves

Quantity
Make/type
Size
Working pressure
Gasket type
Hydraulic/manual

E.5 BOP Control System**E.5.1 Accumulator Unit**

Make/Model	: CAD Control System /Type:CAD1170-3SS10K23U102
Location	: Cantilever intermediate platform
Fluid reservoir capacity	: 1400 gallon stainless
Glycol/water mix rate	: NA
Glycol reservoir capacity	: NA
Total accumulator capacity (w/opre-charge)	: 72 x 15 gallon each
System working pressure	: 3000psi
Control manifold model	: Stainless type
Regulator type	: Remote control
Total useful accumulator volume	
- equals all preventer opening and closing volumes	: Per API 16D
- Plus percent additional volume	: Per API 16D

E.5.2 Accumulator Hydraulic Pumps

Electric driven:	
- Quantity	: 2
- Make/Model	: IEC 75 KW
- Each driven by motor of power	: 100 hp
- Flow rate of each pump	: 48 gpm@3000psi
- At operating pressure	: 2700psi
- Operable off emergency generator	: Yes

E.5.3 Primary Control Panel

Control panel make/model	: CAD Control System
Location	: HPU Cantilever Port Aft
Panel controls for the following functions	
- All annular BOPs	: Yes
- All ram BOPs	: Yes
- Lock for ram BOPs	: Yes
- Diverter System	: Yes
- Kill and choke line valves	: Yes
- Low accumulator pressure warning	: Yes
- Low reservoir level warning	: Yes
- Low rig air pressure warning	: Yes
- System pressure regulator	: Yes
- Pressure regulator for annular	: Yes
- Flowmeter	: Yes
- Quantity of pressure gauges	: 26
- Other control functions	: Yes

E.5.4 Remote Control Panels

Make/model	: CAD Control System
Location	: Driller's control Room
Location	: Tool pusher' Room
Ability to operate main closing unit valves directly	: Yes
System routing (direct or thru panel)	: Yes
Remote control of system pressure regulator	: Yes at Driller's control Room No at Tool pusher' Room
Remote control of annular pressure regulator	: Yes at Driller's control Room No at Tool pusher' Room

E.6 Choke Manifold

All appropriate components H ₂ S rated	: Yes
---	-------

E.6.1 Choke Manifold

Nominal size	: 3-1/16"
Minimum ID	: 3-1/16"
Maximum working pressure	: 15,000 psi
Quantity of fixed chokes	: 2
- Make/model	: WOM
- Size (ID)	: 3-1/16"
Quantity of adjustable chokes	: 0
- Make/model	: WOM
- Size (ID)	: 3 1/16"
Quantity of power chokes	: 2
- Make/model	: WOM
- Size (ID)	: 3-1/16"
Power choke remote control panel	: Yes
- Make/model	: WOM
- Location	: Drill floor & DCR
Glycol injection	: No

E.7 Flexible Choke & Kill Lines (BOP to Manifold)

Quantity	: 2
Make/type	: CONTITECH
ID	: 3"
Working pressure	: 15,000 psi
H ₂ S service	: NACE MR-01-75

E.8 Flexible BOP Control Hoses

Quantity	: 20
Make/model	: GS
ID	: 6 x 1-1/2" 14 x 1"
Working pressure	: 3000psi
Fire resistant	: Yes

E.9 BOP Testing Equipment**E.9.1 Electrical BOP Test Pump**

Make/model	: CAD Control System
Type	: ETU-2088082BBZ1
Pressure rating	: Two rating 30,000 psi & 1,000psi
Chart recorder	: Yes

E.9.2 BOP Test Stump

Size	: GE Hydril 18-3/4" 15,000 psi
------	--------------------------------

E.10 BOP Handling**E.10.1 BOP Hoist System**

Make/type	: IR / BHS200R-E13421, Lift chain air drive
Quantity of hoists	: 2 * 100MT (220.5kips)
Number of lift points on BOP	: 2
System safe working load (max BOP wt)	: Approx 275.6kips (125MT)

E.10.2 Work Platforms

BOP work platform (adjustable/fixed/none)	: Fixed
Conductor pipe platform	: Yes

E.10.3 Conductor Pipe Tensioning System

Make/type	: TSC / CF-272
Tension capacity	: 600 kips
Number of lift points	: 8
Stroke	: 24" (610mm)

SECTION F—MUD SYSTEM / BULK SYSTEM**F.1 High Pressure Mud System**

System working pressure	: 7,500 psi
System test pressure	: 11,250 psi

F.1.1 Mud Pumps

Quantity	: 3
Make	: TSC
Model	: WF-2200
Type (triplex/duplex)	: Triplex
Mud pump drive motors/pump	: 2
- Motor type	: AC motor YJ-243B
- Continuous power rating per motor	: 860kw
- Power	: 2,200 hp
Fluid end	: 14P-220
- Maximum working pressure	: 7,500psi
- Test pressure	: 7,500psi
Pump stroke counter type	: Proximity Switch
Discharge/suction line ID	: 5" / 12"
Mud pump pulsation dampener type	: 2 x 20 gallon each
Reset relief valve	: Yes Spring – Reset
Working flowrate per pump at 90% of max	: Max. 1005gpm.
- Liner size	: 5" to 9"
- Pump speed (90% of max)	: 110 spm
- Pump pressure	: Max. 7500psi
- Working flowrate	: 179 ~1005 USgpm
Supercharging pump type	: Centrifuge Pump HCP 6x8x14
- Driven by motor of power	: 125 hp

F.1.2 Transfer Pumps / Mixing Pumps

Mixing Pumps:

- Quantity	: 3
- Make/model	: TSC HCP 8x6x14
- Type/size	: Centrifugal HCP 8x6x14
- Output capacity	: 968 USgpm (220m ³ /h)
- Drive motor type	: Horizontal
- Power output	: 150 hp

Transfer / Charging Pumps:

- Quantity	: 3
- Make/model	: TSC HCP 8x6x14
- Type/Size	: Centrifugal HCP 8x6x14
- Output capacity	: 968 USgpm (220m ³ /h)
- Drive motor type	: Horizontal
- Power output	: 125 hp

F.1.3 Booster Pump

Quantity	: NA
Make/Model	: NA
Type/Size	: NA
Output capacity	: NA
Drive motor type	: NA
Power output	: NA

F.1.4 Standpipe Manifold

Quantity of standpipes	: 1
Standpipes ID	: 3-1/16" and 5-1/8"
H-Type standpipe manifold	: Yes
Kill line outlet	: Yes
Fill-up line outlet	: Yes
Bleed-off line outlet	: No

F.1.5 Rotary Hoses

Quantity	: 2
Make/type	: Tech flow/ API 7K
ID x Length	: 5" x 102'
Working pressure	: 7,500 psi
Snubbing lines	: Yes

F.1.6 Cementing Hoses

Quantity	: 1
Type (armor sheath/flexible steel pipe)	: Armor sheath
Length	: 60'
ID	: 3-1/16"
Working pressure	: 15,000 psi

F.1.7 High Pressure Flexible Steel Pipe

Make/type	: NA
Integral connections/fittings (Non threaded)	: NA
ID	: NA
Working pressure	: NA
Section length	: NA
- Quantity	: NA
Section length	: NA
Quantity	: NA
Sweep swivels, make/type	: NA
- Nom size ID	: NA
Suitable for H ₂ S services	: NA

F.2 Low Pressure Mud System**F.2.1 Mud Processing Tanks**

Sand trap tank, useable volume	: 100.6 bbl (16 m ³)
Degasser tank, useable volume	: 100.6 bbl (16 m ³)
- Agitated	: No
Desander tank, useable volume	: NA
- Agitated	: No
Desilter tank, useable volume	: NA
- Agitated	: No
Mud cleaner tank, useable volume	: NA
- Agitated	: No
Centrifuge tank, useable volume	: 84.9 bbl (13.5 m ³)
- Agitated	: No
Clean tank, useable volume	: 75.5 bbl (12 m ³)
- Agitated	: No
Total useable capacity	: 361.6 bbl (57.5 m ³)

F.2.2 Mud Tanks

Quantity	: 10
Total capacity (useable)	: 4112.3 bbl (653.8 m ³)
Useable capacity No. 1	: 418.6 bbl (66.55 m ³)
-Type	: Active
Useable capacity No. 2	: 335.2 bbl (53.29 m ³)
-Type	: Active
Useable capacity No. 3	: 460.6 bbl (73.23 m ³)
-Type	: Active
Useable capacity No. 4	: 461.4 bbl (73.36 m ³)
-Type	: Active
Useable capacity No. 5	: 335.2 bbl (53.29 m ³)
-Type	: Reserve
Useable capacity No. 6	: 418.6 bbl (66.55 m ³)
-Type	: Reserve
Useable capacity No. 7	: 422.2 bbl (67.12 m ³)
-Type	: Active
Useable capacity No. 8	: 419.3 bbl (66.67 m ³)
-Type	: Active
Useable capacity No. 9	: 419.3 bbl (66.67 m ³)
-Type	: Reserve
Useable capacity No. 10	: 422.2 bbl (67.12 m ³)
-Type	: Reserve
Height	: 14'11" (4.560m)
Mixer	: Yes
Mud guns	: Yes

F.2.3 Pill/Slug Tank

Capacity (useable) : 204.4bbl (32.5m³) each x 2
 Mud agitator : Yes
 Mud guns : Yes

F.2.4 Trip Tank

Quantity : 2
 Capacity (useable) : 25.2bbl (4m³) each,
 Level indicator : Yes
 Electric pump make : TSC (2 pumps, 1 for each tank)
 - Model/type : HCP4X3X13
 - Rated capacity : 50 hp
 Facility for casing fill-up : No
 Alarm and strip chart recorder : Yes

F.2.5 Stripping Tanks

Quantity : 1
 Capacity (useable) : 4.4bbl (0.7 m³) each
 Capacity/foot : 0.767 bbl/ft
 Level indicator : Yes
 Facility for casing fill-up : No
 Alarm and strip chart recorder : Yes

F.2.6 Chemical/Caustic Mixing Tank

Capacity (useable) : 100 Gallon
 Chemical mixer type : Vortex air driven pump 9.4bbl/hr (1.5m³/hr)

F.2.7 Shale Shakers

Primary:
 - Quantity : 4
 - Make/model : M-I Swaco
 - Type : MD-3 triple -deck
 - Gross Screen Area : Scalping deck: 25.4 ft² (2.4 m²)
 : Primary decks, 50.8 ft² (4.7 m²)
 Cascading:
 - Quantity (Not Provided)
 - Make/model
 - Type
 - Nominal flow rate (total)

F.2.8 Desander

(Function replaced by shale shaker)

Quantity
 Make/model
 Type

Nominal flow rate
 Number of cones
 - Size
 Feed pump make/model
 - Type/Size
 - Capacity
 - Drive motor hp
 Is pump dedicated to desander

F.2.9 Desilter (Function replaced by shale shaker)

Quantity
 Make/model
 Type
 Nominal flow rate
 Number of cones
 - Size
 Feed pump make/model
 - Type/Size
 - Capacity
 - Drive motor hp
 Is pump dedicated to desilter

F.2.10 Mud Cleaner (Function replaced by shale shaker)

Quantity :
 Make/model :
 Type :
 Nominal flow rate
 Number of cones :
 - Size :
 Feed pump make/model :
 - Type/Size :
 - Capacity :
 - Drive motor hp :
 Is pump dedicated to mud cleaner :

F.2.11 Mud/Gas Separator (Poor Boy)

Make/type : RichForm
 Dimensions (height x OD) : 293-21/32" x 47-1/4" (7459mm x 1200mm)
 Capacity : 35.7bbl/min (5678 L/min)
 Gas discharge line ID : 10"
 Gas discharge location, primary : Crown Block
 Can discharge be tied into burner system : No
 Vacuum breaker : Yes
 Mud seal height : 12'
 Pressure gauge : Yes

R550D IADC-400-1 (Rev: 08 May 2018)

Calculated gas throughput : 51.89 bbl/min (8.25 m³ /min)

F.2.12 Degasser

Make/type : M-I Swaco/CD1400
Nominal flow rate : 1300 gpm
Feed pump make/model : Integrated with degasser in one skid
: 43-45/64" x 41-1/2" x 121-57/64"
- Type/size (1110mm x 1054mm x 3096mm)
- Capacity : 1,000-1,300 gpm
- Drive motor hp : 30 hp
- Is pump dedicated to degasser : Yes

F.2.13 Mud Agitators

Quantity : 10 for mud tanks
Make/model : TSC/ HAV-30
Driven by motor of power : 30kw
Located in tanks : Yes
Quantity : 2 for slug pits
Make/model : TSC/ HAV-7.5
Driven by motor of power : 7.5 KW
Located in tanks : Yes
(see F.2.1 & F.2.2 for tank designations)

F.2.14 Mud Centrifuge

(Not provided)

Quantity
Make/model
Feed pump make/model
- Type/size
- Capacity
- Drive motor hp
Is feed pump dedicated to centrifuge(s)

F.2.15 Mud Laboratory and Facilities

Separate room : Yes
Equipped with:
- Mud balance : No
- Marsh funnel : No
- Filtration kit : No
- Sand content kit : No
Air conditioning : Yes
Positive pressure : No

F. 2.16 Cutting Screw conveyor

Quantity : 2
Make/model : TSC/ CA300-13 and CA300-7

R550D IADC-400-1 (Rev: 08 May 2018)

Capacity : Max 138.4bbl/h (22m³/h)
Drive motor hp : 11kw

F. 2.17 Vertical Cutting Dryer

Quantity : 1
Make/model : KEMTRON / KT-4060
Drive motor hp : 75hp

F.3 Bulk System

F.3.1 Barite/Bentonite Silos

Quantity : 4
Capacity of each silo : 1695.1ft³ (48m³)
Locations : Main deck
Type weight loadcell : Electronic
- Manufacturer : WB
Pressure rating : 87psi (0.6MPa)
Relief valve (s) installed : Yes

F.3.2 Cement Silos

Quantity : 4
Capacity of each silo : 1695.1ft³ (48m³)
Locations : Main deck
Type weight loadcell : Electronic
- Manufacturer : WB
Pressure rating : 87psi (0.6MPa)
Relief valve(s) installed : Yes
Separate mud/cement loading facilities : Yes
Cement discharge independent
from barite/bentonite : Yes

F.3.3 Surge Tank for Barite/Bentonite

Quantity : 2
Capacity of each tank : 88.3ft³ (2.5m³)
Type weight loadcell : Electronic
- Manufacturer : WB
Pressure rating : 87psi (0.6MPa)
Relief valve(s) installed : Yes

F.3.4 Mud Hopper

Quantity : 2
Make/model : Votex/Lobestar Shear Mixer
Feed pump make/model : TSC

R550D IADC-400-1 (Rev: 08 May 2018)

- Type/size : HCP8x6x14
- Capacity : 23.1 bbl/min (3.7m³/min)
- Drive motor hp : 150 hp
- Is feed pump dedicated to mud hopper(s) : No

F.3.5 Big bag hopper

- Maximum Hopper Framework load : 3000 lbs
- Maximum Hydra Flow Rate : 600 gpm (136 m³/h)

F.3.6 Sack Cutting and Bulk Powder Dosing Unit

- LobestarShearMixer : 1
- Capacity : 480 x 55lbs/h (480 x 25kg/h)
- dust cleaner fan(collection machine) : Integrated

F.3.7 Surge Tank for Cement

(Third party equipment)

- Quantity
- Capacity of each tank
- Type weight loadcell
- Manufacturer
- Pressure rating
- Relief valve(s) installed

F.3.8 Bulk Transfer System

(See also C.1.8 - Compressed Air Systems)

- Independent air system for the silos and surge tanks consisting of a high-volume low-pressure compressor and air drier : Yes
- Air reduced from main air supply through pressure regulators : Yes
- Separate volume tank and drier : Yes

SECTION G–CASING / CEMENTING EQUIPMENT (OWNER FURNISHED EQUIPMENT WHERE NOT MENTIONED)

G.1	Casing Equipment	
G.1.1	Drive Hammer	
	Make/type	:
	Max casing/conductor OD	:
G.1.2	API Casing Drifts	
	For casing OD, weight, quantity	:
G.1.3	Clamp-On Casing Thread Protectors	
	For casing OD, quantity	:
G.1.4	Side Door Casing Elevator	
	Quantity	:
	For OD casing	:
	Make/type	:
	Capacity	:
G.1.5	Single Joint Casing Elevators	
	Quantity	:
	For OD casing	:
	Make/type	:
G.1.6	Slip Type Elevator/Spiders	(Function replaced by VES-CL 500H elevator for 3.5"-7")
	Quantity	: 1
	Make/type	: Blohm + Voss/VES-CL 500H
	Pneumatic/Manual	: hydraulic
	Capacity	: 500 st
	Slips for OD casing sizes	: 3.5"-7"(No insert is provided)
G.1.7	Casing Slips	
	Quantity	: 4
	Make/type	: TSC/CMS-XL 9-5/8 & CMS-XL 13-3/8 & CMS-XL 20 & CMS-XL 30
	For OD casing	: 9-5/8", 13-3/8", 20", 30"
G.1.8	Casing Bowls	
	Quantity	: 3
	Make/type	: TSC/6115 & 6114 & 6126
	For OD casing (max/min)	: 2-3/8" ~ 8-5/8" 9-5/8" ~ 10-3/4" 11-3/4" ~ 13-3/8"

G.1.9 Manual Casing Tongs

Quantity (sets) :

Make/type :

W/jaws for OD casing (max/min) :

G.1.10 Power Casing Tongs

Quantity :

Make/type :

W/jaws for OD casing (max/min) :

Max output torque :

Torque indicator : yes/no

Back-up arm : yes/no

G.1.11 Power Unit for Casing and Tubing Tongs

Quantity :

Make/type :

Capacity (ea) :

Output pressure :

Dedicated unit : yes/no

G.1.12 Casing Circulating Head (Swedge)

For OD casing :

Connection type : top/bottom

G.1.13 Casing Spears (International)

Quantity :

Make/type :

For OD casing :

For casing weight :

Pack-off : yes/no

G.1.14 Casing Cutters (Internal)

Quantity :

Make/type :

For OD casing (max/min) :

G.1.15 Crossover to Handle Casing with Drill Pipe

Quantity :

For OD casing :

Casing connection type :

Drill pipe connection type :

Rated capacity :

G.1.16 Casing Scrapers

Quantity :

Make	:
For OD casing	:
For casing weight	:
OD body	:
Connection type	:
Blade type (roller/fixe)	:

G.2 Cement Equipment

G.2.1 Cement Unit (Third party equipment)

Owner
 Free placement basis
 Make/type
 No. of triplex pumps
 Maximum working pressure
 Maximum flowrate (total)
 Unit powered by (electric/diesel)
 Recirculating mixing system
 - Capacity
 - Motor power
 Liquid additive system
 Pre-mix/batch tank
 - Quantity
 - Capacity (total)
 Pressure recorder
 Densometer recording advice

G.2.2 Cementing Manifold

Discharge manifold working pressure	: 15,000psi
Cement pump discharge lines min ID	: 3"
Cement pump discharge lines working pressure	: 15,000psi
Manifold safety pressure relief valve	: No

G.2.3 Cementing Standpipe

Quantity	: 1
Working Pressure	: 15,000psi
ID	: 3"
Connection to choke manifold	: Yes
Connection to standpipe manifold	: No

G.2.4 Cementing Kelly (Not provided)

Quantity
 Nominal size OD
 Total length

Working length
Connection type
Cement head

G.2.5 Cementing Tubing

(Not provided)

Size
Length (total)
X-overs to drillpipe

SECTION H—INSTRUMENTATION / COMMUNICATIONS**H.1 Drilling Instrumentation at Drillers Position****H.1.1 Weight Indicator**

Make/type : TSC/ DCR Display screen
 Sensor type : M/D Load Cell, 4~20 mA

H.1.2 Standpipe Pressure Gauges

Quantity : 2
 Make/type : WOM/BY-0637
 Max. pressure reading : 10,000psi

H.1.3 Choke Manifold Pressure Gauges

Quantity : 2
 Make/type : WOM/BY-4492S
 Max. pressure reading : 20,000psi

H.1.4 Rotary Instrumentation**H.1.4.1 Tachometer**

Make/type : TSC/ 4~20mA
 Maximum RPM : 20 rpm

H.1.4.2 Torque Indicator

Make/type : TSC
 Maximum torque : 35,000lb-ft@6rpm

H.1.5 Top Drive Instrumentation**H.1.5.1 Tachometer**

Make/type : CANRIG/4~20 mA
 Maximum RPM : 265 rpm

H.1.5.2 Torque Indicator

Make/type : CANRIG
 Maximum torque : 95,000ft-lbs

H.1.6 Pump Stroke Counters

Quantity : 3
 Make/type : TSC
 Stroke indicator and cumulative
 stroke counter for each pump : Yes

H.1.7 Tong Torque Indicator

Make/type : TSC
 Maximum torque : 120,000 ft-lbs

H.1.8 Pit Volume Totalizer

Make/model:	: E + H
Floats in active mud tanks	: No
- Quantity per tank:	: 1
Floats in reserve mud tanks	: No
- Quantity per tank	: 1
Floats in mud processing tank	: No
- Quantity per tank:	: 1
Loss/gain indicator	: Yes
- Audio Alarm	: Yes
- Visual Alarm	: Yes

H.1.9 Mud Flow Indicator

Make/model	: TSC
High/low Alarm	
- Audio Alarm	: Yes
- Visual Alarm	: Yes
Sensor location:	: Mud return line

H.1.10 Trip Tank Indicator

Make/model	: E+H
Chart recorder	: No
Alarm	: Yes

H.1.11 Automatic Driller

Make/model	: TSC
WOB/ROP	: Yes

H.1.12 Remote Choke Control Unit (see E.5)**H.1.13 Crown Clearance Indicator****(Not provided)**

Make/type

H.1.14 Mud Inlet Temperature Sensor

Make/model	: TSC
Quantity	: 1
Measurement Range	: 0-150°C
Sensor Location	: Mud Inlet Line

H.1.15 Mud Outlet Temperature Sensor

Make/model	: TSC
Quantity	: 1
Measurement Range	: 0-150°C
Sensor Location	: Mud Return line

H.1.16 Depth Sensor

Make/model	: TSC
Quantity	: 1
Sensor Location	: Crown Block

H.2 Drilling Parameter Recorder

Quantity	: Two display screens
Make/type	: TSC/PLC
Location – 1	: Rig floor
- Type (display/recorder/both)	: Both
Location - 2	: Tool pusher room
- Type (display/recorder/both)	: Both
Location - 3	: Company man office
- Type (display/recorder/both)	: Both
Number of parameters recorded	: All drilling parameter recorded

H.3 Instrumentation at Choke Manifold**H.3.1 Standpipe Pressure Gauge**

Quantity	: 2
Make/type	: WOM
Pressure range (max.)	: 0~10000 psi
Visible from choke operation position	: Yes

H.3.2 Choke Manifold Pressure Gauge(Casing Pressure Gauge)

Quantity	: 2
Make/type	: WOM
Pressure range	: 0-20,000 psi
Visible from choke operating position	: Yes

H.4 Standpipe Pressure Gauge

Quantity	: 2
Make/type	: WOM/M/D
Pressure range	: 0-10,000 psi
Visible from drillers position	: Yes
Visible from choke operating position	: Yes

H.5 Deviation Equipment (Optional)**H.5.1 Deviation Recorder**

Quantity :
 Make/type :
 Deviation range :

H.5.2 Slickline Unit (see B.2.4)**H.6 Rig Communication System****H.6.1 Rig Telephone System**

No. of stations : 152
 Make/type : HASHIN
 Explosion proof : Partly

H.6.2 Public Address System

Can be combined with H.6.1 above: : Yes
 No. of stations : 150
 Make/type : HASHIN
 Explosion proof : Partly

H.6.3 Drill Floor Talkback System

No. of stations : 5
 - Location : Monkey board Drill floor-Ex, Drill Cabin x 2,
 Shaker house-Ex, BOP deck-Ex
 Make/type : TSC
 Explosion proof : Yes

H.6.4 Hand-held VHF Radios

Quantity : 12
 Quantity intrinsically safe : 0

H.6.5 Crane Communication System

Quantity : PAGA System, VHF Radio, Telephone System
 on each crane
 Make/type : HASHIN
 Explosion proof : No
 Part of rig telephone system (H.6.1) : Yes
 Part of public address system (H.6.2) : Yes

H.7 Environmental Instrumentation**H.7.1 Temperature Indicators**

Air temperature (make/model) : OBERSERVATOR

Recorder : Yes
 Seawater temperature (make/model) : Not Provide
 Recorder :

H.7.2 Barometric Pressure Indicator

Make/model : OBERSERVATOR
 Recorder : Yes

H.7.3 Humidity Sensing Indicator

Make/model : OBERSERVATOR
 Recorder : Yes

H.7.4 Wind Speed/Direction Meter

Make/model : OBERSERVATOR
 Recorder : Yes

H.7.5 Wave Profile Recorder

(Not provided)

Make/model
 Recorder

H.7.6 Current Indicator

(Not provided)

Make/model
 Located at:
 Recorder

H.7.7 Weather Facsimile

Make/model : JRC/JAX-9B
 Located at : Radio room
 Recorder : Yes

H.8 Navigation Instrumentation

H.8.1 Gyro Compass

Make/model : JRC/CMZ900B
 Located at : Radio room

H.8.2 Depth Sounder

(Not provided)

Make/model
 Located at
 Recorder

H.8.3 Radar

(Not provided)

Quantity
 Make/Model

Located at

Bandwidth

H.9 External Communications Equipment**H.9.1 SSB Transceiver**

Location(s) : Radio Room
 Quantity : 1
 Make/model : FURUNO/FS-2575
 Power : 220V
 Frequency ranges (low/high) : 1605.0kHz to 27500.0kHz
 (Synthesized/Crystal) : crystal
 Facsimile capable (see also H.9.9) : Yes
 Telex capable (see also H.9.10) : Yes

H.9.2 E.P.I.R.B.S.

Quantity : 1
 Make/model : SAILOR/SE405-II
 Location(s) : Outside Radio Room

H.9.3 Marine VHF Radio

Quantity : 1
 Make/model : FURUNO/FM-8900
 Power : 220V
 Channels : INTL:57, USA:50, Canada:57, Weather:10,
 Inland waterway: 57, Private: 20
 Location : Radio Room and Tool Pusher Room

H.9.4 Aircraft Radio Beacon Transmitter

Quantity : 1
 Make/model : FURUNO
 Power : 220V

H.9.5 Aeronautical VHF Transceiver

Quantity : 1
 Make/model - portable : JOTRON/TR-810DE
 Power : DC 24V
 Frequency range (low/high) : 118 MHz to 137 MHz
 (Synthesized/Crystal) : Crystal
 Location(s) : Radio room

H.9.6 Watch Receiver

Quantity : 1
 Make/model : FURUNO/NX-700A
 Frequency : 518 kHz and 490/4209.5 kHz

H.9.7 Satellite Communication System (GMDSS)

Make/model : FURUNO/FELCOM 18
Type : INMARSAT 'C'
Facsimile capable (see also H.9.9) : Yes
Telex capable (see also H.9.10) : Yes
Locations : Radio room

H.9.8 Cellular (Not provided)

Number of phone lines

H.9.9 Facsimile (Not provided)

Make/model
Connected to

H.9.10 Telex (Not provided)

Make/model
Connected to

H.9.11 Scrambler (Not provided)

Make/model
Connected to

H.9.12 Other Communication Systems (Optional) (Not provided)

Make/model

SECTION I—PRODUCTION TESTING EQUIPMENT (OWNER FURNISHED EQUIPMENT WHERE NOT MENTIONED)
I.1 Burners

Make/type :
Quantity :
Capacity :
Weight :
Water requirement at 100 psi :

I.2 Burner Booms

Make/type :
Quantity :
Length :
Horizontal : yes/no
Maximum wind speed :
Walkway and handrails : yes/no
Burner platform size :
Burner mounting rotatable : yes/no

I.3 Lines Required on Burner Booms
I.3.1 Oil Line

ID : 3 “
Working pressure : 1500 psi
Connection type at burner end : Hammer Union FIG 400
H₂S : Yes

I.3.2 Gas Line

ID : 6”
Working pressure : 1500 psi
Extended beyond burner by :
Connection type at burner end : Hammer Union FIG 400
H₂S : Yes

I.3.3 Water Line

ID : 4”
Working pressure : 1,000 psi
Connection type at burner end : Hammer Union FIG 206

I.3.4 Air Line

ID : 3”
Working pressure : 150 psi
Connection type at burner end : Hammer Union FIG 206

I.3.5 Pilot Gas Line

ID : 1”
Working pressure : 150 psi
Connection type at burner end : Quick Coupling

I.4 Sprinkler System

System in place :
 Pump source : From Sea Water System/Hull Fire Water System

I.5 Fixed Piping for Well Testing**I.5.1 Drill floor to Separator Area**

Type (threaded, welded, both) : Welded
 Quantity : 1 on the drill+1 on the cantiliver+1 on the hull
 Size ID : 3"
 Working pressure : 15000 psi
 Connection type on drill floor : 3" fig 2202 female sub sch XXS.BWE, W/male blind & SS. Chain
 Connection type at separator : 3" fig 2202 female sub sch XXS.BWE, W/male blind & SS. Chain
 Number of valves/lines : 0
 - Size of valves : NA
 H₂S : Yes

I.5.2 Separator Area to Burner Booms

Service (oil/gas) : Oil & Gas & Vent
 Type (threaded, welded, both) : Welded
 Quantity : 3 (1 for Oil, 1 for Gas, 1 for Vent)
 Size ID : 6" for natural gas, 4" for low pressure vent, 3" for crude oil
 Working pressure : 1500 psi x 3
 Connection at separator : Hammer union fig 400 BWE SCH. XS. female sub C/W male blind x 3
 Connection at boom : Hammer union fig 400 BWE SCH 160 female sub C/W male blind x 3 (port/stbd)
 Number of valves/lines : 3 (port/stbd)
 - Size of valves : 6", 4", 3" (port/stbd)
 H₂S : Yes
 Valves installed near separator area for switching gas to either burner : No

I.5.3 Water Lines to Burner Booms

Type (threaded/welded/both) : Welded
 Quantity : 2 (each independently for 1 booms on each side of rig)
 Size ID : 4"
 Working pressure : 1000 psi
 Number of valves required : 1 (port/stbd)
 - Size of valves : 4" (port/stbd)
 Pump source : Mud Pump

I.5.4 Air System to Burner Booms

Type (threaded/welded/both) : Welded
 Quantity : 1
 Size ID : 3"

Working pressure : 150 psi
 Non-return valves fitted : Yes
 Air Source : Third party air compressor

I.5.5 Oil Storage Tank to Offload

Type (threaded/welded/both) :
 Quantity :
 Size ID :
 Working pressure :
 Connection at separator area :

I.5.6 Separator To Vent Stack Of Rig

Type (threaded/welded/both) :
 Quantity :
 Size ID :
 Working pressure :
 Connection at separator area :

I.6 Auxiliary Power Availability

I.6.1 For Field Laboratory (Not provided)

Quantity
 Volts
 Frequency
 Breaker

I.6.2 For Crude Transfer Pump (Not provided)

Quantity
 Volts
 Frequency
 Breaker

I.6.3 For Electric Heaters (Not provided)

Quantity
 Volts
 Frequency
 Breaker

SECTION J–WORKOVER TOOLS**SECTION K – ACCOMODATION****K.1 Office****K.1.1 Company Representative's Office**

Quantity	: 1
- Number of combination office/staterooms in above	: 1
Complete with desk, filing cabinets and other necessary furniture	: Yes
Quantity with unrestricted view to drill floor	: 1

K.1.2 Contractor Representative's Offices

Quantity	: 1
Quantity with unrestricted view to drill floor.	: 1

K.1.3 Control Room

Quantity	: 1
----------	-----

K.1.4 Radio Room

Quantity	: 1(Incl, in Control Room)
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K.1.5 Helicopter Ready Room

Quantity	: 1
----------	-----

K.1.6 Hospital Room

Number of beds/bunks	: 2
Dangerous drugs locker	: Yes

K.2 Living Quarters**K.2.1 Accommodations**

Total beds:	: 150
- No. of beds per room type	: 1-Man room
- Number of rooms	: 14
- Toilets (private/shared/communal)	: Private
- Showers (private/shared/communal)	: Private
- No. of beds per room type	: 2-men room
- Number of rooms	: 68
- Toilets (private/shared/communal)	: Private
- Showers (private/shared/communal)	: Private

K.2.2 Galley

Quantity	: 1
----------	-----

K.2.3 Mess Seating Capacity

Main mess	: 72 persons
Aux. mess	: 0

K.2.4 Meeting Rooms

Quantity	: 2
----------	-----

K.2.5 Recreation Rooms

Quantity:	: 3
Recreation facilities:	
- Ping Pong Table	: 0
- TV	: 2
- VCR	: 2
- Pool Table	: 0
- Ping Pong Table	: 0
- Computer	: 0
- Workout/Weight Room	: 1
- Other	: 0

K.2.6 Other Rooms

Change Rooms	: 3
PrayerRooms	: 0
Cinema	: 2
Other	: 0

SECTION L–SAFETY EQUIPMENT**L.1 General Safety Equipment (Owner furnished equipment where not mentioned)****L.1.1 General Personnel Protective Gear**

Safety Glasses

- (Contractor/everyone/not supplied) : Not Supplied

Safety Hats

- (Contractor/everyone/not supplied) : Not Supplied

Safety boots

- (Contractor/everyone/not supplied) : Not Supplied

Safety clothing

- (Contractor/everyone/not supplied) : Not Supplied

Ear protection

- (Contractor/everyone/not supplied) : Not Supplied

Rubber gloves

- (Contractor/everyone/not supplied) : Not Supplied

Rubber aprons

- (Contractor/everyone/not supplied) : Not Supplied

Rubber gloves - elbow length

- (Contractor/everyone/not supplied) : Not Supplied

Fullface visors

- (Contractor/everyone/not supplied) : Not supplied

Eye shields (for grinders)

- (Contractor/everyone/not supplied) : Not Supplied

Dust masks

- (Contractor/everyone/not supplied) : Not Supplied

Explosion proof hand torches

- (Contractor/everyone/not supplied) : Not Supplied

Safety belts c/w lines

- (Contractor/everyone/not supplied) : Not Supplied

L.1.2 Decontamination Stations**L.1.2.1 Eye Wash Stations**

Quantity- fixed : 5

Make/model : YONGLI

Location(s) : Mud pump room/Mud pit room /Shale shaker house/Sack storage room/Drill floor

Quantity- portable : 1

Make/model : YONGLI

Location(s) : Sack storage room

L.1.2.2 Safety Showers : 5

Quantity : YONGLI

Location(s) : Mud pump room/Mud pit room /Shale shaker house/ Sack storage room/Drill floor

L.1.3 Derrick Safety Equipment

Derrick escape chute(rem chute) : 1

- Make/model : SALA
 Geronimo line : Yes
 Derrick safety belts : 1
 - Make/type : SALA

L.1.4 Derrick Climbing Assistant (Not provided)
 Make/type

L.1.5 Fresh Air Blowers (Bug Blowers)

Quantity : 1
 Make/type : JOSUN/CBZ-90B
 Located at : Drill Floor

L.2 Gas / Fire / Smoke Detection

L.2.1 H₂S Monitoring System

Make/type : DETRONIC
 Sampling points at;
 - Bell nipple : Yes
 - Drill floor : Yes
 - Shale shaker : Yes
 - Mud tanks : Yes
 - Ventilation system into living quarters : Yes
 - Other : No
 Alarms at
 - Drillers console (audible/visual/both) : Both
 - Engine Room (audible/visual/both) : Both
 - Mud room (audible/visual/both) : Both
 - Living quarters each level (audible/visual/both) : Both
 - Central area each structural level (audible/visual/both) : Both
 - Other : No
 - Tied to general alarm : Yes
 Central control panel : Yes
 - Located at : Radio room
 Local alarm (audible/visual/both) : Visual

L.2.2 Combustible Gas Monitoring System

Make/type : DETRONIC
 Sampling points at
 - Bell nipple : Yes
 - Drill floor : Yes
 - Shale shakers : Yes
 - Mud tanks : Yes
 - Ventilation system into living quarters : Yes
 - Other : No
 Alarms at
 - Drillers console (audible/visual/both) : Both
 - Engine room (audible/visual/both) : Both

- Mud room (audible/visual/both)	: Both
- Living quarters each level (audible/visual/both)	: Audible
- Central area each structural level (audible/visual/both)	: Audible
- Other	: No
- Tied to general alarm	: Yes
Central Control Panel	: Yes
- Located at	: Radio room
Local Alarm (audible/visual/both)	: Visual

L.2.3 H₂S Detectors (Portable)

Quantity	: 2
Make/type	: SCOTT
Stain tubes for H ₂ S; measuring range	: 0 to 500ppm
From 1 to 20 percent	: NA
From 100 to 600 percent	: NA

L.2.4 Explosimeters

Quantity	: 2
Make/type	: SCOTT

L.2.5 CO₂ Gas Detectors (Portable) (NA)

Quantity	
Make/type	
Stain tubes for CO ₂ : measuring range	
From 1 to 20 percent	
From 5 to 60 percent	

L.2.6 O₂ Meter (Portable)

Quantity	: 2
Make/type	: SCOTT

L.2.7 Fire/Smoke Detectors in Accommodation

Make/type	: CONSILIUM
Fire detection	: Yes
Smoke detection	: Yes
Central control panel	: Yes
- Location	: Radio Room
Alarms:	: 21
Pull boxes	: 72

L.3 Firefighting Equipment

L.3.1 Fire Pumps

Quantity	: 2
Make/model	: AZCUE / LN-EP-65-200 x 1, LN-VP-65-200 x 1
Type	: Vertical IN-LINE monobloc centrifugal with priming pump x 1, Vertical IN-LINE monobloc centrifugal with priming ejector x 1

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Output (each)	: 120m ³ /h x 2
Location	: Aux. pump room (P/S)
All offtake points supplied by all pumps	: Yes

L.3.2 Hydrants and Hoses

Hydrants positioned such that any point may be reached by a single hose length from two separate hydrants	: Yes
Quantity of hydrants	: 58
Hose connections/hydrant	: 1
Hose max diameter	: 39 x DN65, 29 x DN50
Length	: 39 x 15m(DN65), 29 x 20m(DN50),

L.3.3 Portable Fire Extinguishers

Quantity (total)	: 145
Type 1 - CO ₂	: 20/7 kg
	: 2/18.5 kg
Type 2 - Dry chemical	: 119/9 kg
Type 3 – Foam	: 4/9 L
Water	: No
Halon	: No

L.3.4 Fire Blankets

Quantity no.	: 2
Location(s)	: Mechanical Workshop, Galley

L.3.5 Fixed Foam System

Make/type	: Wilhelmsen
Quantity of foam concentrated stored	: 600 L
Foam type	: AFFF
Application rate	: 6.5 L/min/m ²
Foam nozzles	: 10
- Located at	: Shaker House
Automatically injected into fixed fire water system	: No

L.3.6 Helideck Foam System

Make/type	: DIFFS
Quantity of monitors	: 0
Quantity of foam concentrate stored	: 200 L
Foam type	: 1% AFFF
Application rate	: 2650 LPM

L.3.7 Fixed Fire Extinguishing System

Protected spaces	
Engine room, type (Halon/CO ₂ /other)	: CO ₂
- Remote manual release located at	: CO ₂ room and entrance of Engine room
Paint locker, type (Halon/CO ₂ /other)	: CO ₂
- Remote manual release located at	: entrance of Paint locker

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Emergency generator (Halon/CO ₂ /other)	: CO2
- Remote manual release located at	: CO2 room and entrance of Emergency generator room
SCR room, type (Halon/CO ₂ /other)	: CO2
- Remote manual release located at	: CO2 room and entrance of SCR room
Other (specify location and type)	: Mud pit room, CO2
- Remote manual release located at	: CO2 room and entrance of Mud pit room
Alarms (audio,visual,both)	: Both
Automatic shutdown of ventilation fans in protected spaces	: Yes

L.3.8 Manual Water Deluge System

Protected spaces	: Drill floor, well test area, BOP area, Both side of drilling unit, Both side of quarters water curtain
Water supplied from fire main line	: No

L.3.9 Water Sprinkler System in Accommodation (Not provided)

Automatic activation
 Working pressure
 Tank capacity
 Salt water backup
 Type (wet pipe/dry pipe)

L.4 Breathing Apparatus (Ref: H2S Air Breathing System)

L.4.1 General Sets

Quantity no.	: 55 SCBA (H2S Air Breathing System)
Make	: Drager
Type (demand/positive pressure)	: Positive Pressure
Cascade system quick connects	: Yes
Cylinder duration	: 15x 30 mins 40x15mins
Located at	: 1 x Engine Room, 1 x Mud Pump Room, 1 x Sack Storage Room, 1 x Switch Board Room, 1 x Mud Pit Room, 1 x Share With Muster Station S, 1 x Jacking Control Room, 1 x Share With Muster Station P, 1 x Crane S, 1 x Mud Logging Unit, 1 x Upper Mud Processing Area, 1 x Cementing Unit, 1 x Crane Aft 1x Crane P, 8 x Cantilever Area

L.4.2 Escape Sets

Quantity no.	: 175 SCBA + 40 SCBA (H2S Air Breathing System)
Make	: 175 x SUTAI, 40 x Drager
Type (demand/positive pressure)	: 175 x Positive pressure
Cascade system quick connect	: Yes (for 40 x H2S Air Breathing System)
Cylinder duration	: 175 x 15 mins, 40 x 18 mins
Located at	: 2 x Heli Deck&Roof, 43 x 4 th Deck, 48 x 3 rd Deck, 58 x 2 nd Deck, 6 x 1 st Deck, 7 x Mezz Deck, 3 x Mach Deck, 8 x Drill Floor

L.4.3 Cascade Stations

Quantity no.	: 22 stations (for H2S Breathing Air System)
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Make/type : Drager
 Manifold location/outlets at location : Casing board/2 outlets, Monkey board/2 outlets, Drill floor/2 outlets, Driller's cabin/4 outlets, Cellar deck(Port)/2 outlets, Cellar deck(Stbd)/2 outlets, Pipe rack deck/2 outlets, BOP area/2 outlets, Crane(Stbd)/2 outlets, Mud logging unit/2 outlets, Upper mud processing area/2 outlets, Cement unit/2 outlets, Crane(Aft)/2 outlets, Crane(Port)/2 outlets, Switchboard room/2 outlets, Mud pit room/2 outlets, Engine room/2 outlets, Mud pump room/4 outlets, Sack storage room/2 outlets, Jacking control room/4 outlets, Life boat area(Port)/4 outlets, Life boat area(Stbd)/4 outlets

L.4.4 Breathing Air Recharge Compressor

Quantity : 1 (for H2S Breathing Air System)
 Make/type : Drager / Typhoon
 Compressed air storage capacity : 19m³ /hr
 - Working pressure : 30MPa
 Located at : LQ Roof Top Compressor Room

L.4.5 Compressed Air Breathing Apparatus Trolley Unit

Make : NA
 Type (demand/positive pressure) : NA
 Air line length : NA
 Compressed air storage capacity : NA
 - Working pressure : NA
 Including:
 - Face mask : NA
 - Demand valve : NA
 - Microphone : NA
 - Safety harness : NA
 - Safety line (inc. telephone line) : NA

L.4.6 Breathing Air Purity Test Equipment (Not provided)

Quantity
 Make/type

L.5 Emergency First Aid Equipment

L.5.1 First Aid Kits

Quantity : 4

L.5.2 Burn Kits (OFE)

Quantity

L.5.3 Resuscitators (OFE)

Quantity
 Charged (spare) oxygen cylinders

L.5.4 Stretchers

Quantity	: 1
Type	: Lauan Wood Frame c/w Polyester Belt
Located at	: Hospital

L.6 Helideck Rescue Equipment

Aircraft axe	: No
Large firemans rescue axe	: Yes
Crowbar	: Yes
Heavy duty hacksaw	: Yes
- Spare blades	: Yes
Grapnel hook	: Yes
- Length of wire rope attached	: :5cm Circumference×15m Length
Quick release knife	: Yes (Harness knife with sheath)
Bolt croppers	: Yes (Cutter bolt 60mm as per SOLAS)
Fireman's outfit	: Yes
CO ₂ lance	: No
Other	: Adjustable wrench x 1, Assorted screwdriver x 1, Blanket (fire resistant) x 1, Gloves (fire resistant) x 1, Ladder (two-piece) x 1, Fire line (rescue harness) x 1, Pliers(side cutting) x 1

L.7 Emergency Warning Alarms

Approved system to give warning of different emergencies	: Yes
Activated from drill floor	: Yes

L.8 Survival Equipment**L.8.1 Lifeboats**

Make/type	: JIANGYINSHI BEIHAI LSA CO.,LTD /JN-85F-14
Quantity	: 4
Capacity (person/craft)	: 75
Locations (frwd/aft/port/stbd)	: Port/Stbd
Fire protection	: Yes
Radio/EPIRB (see section H.9)	: Yes

L.8.2 Liferafts

Make/type	: Shanghai Star Rubber Product
Quantity	: 6
Capacity (persons/craft)	: 25
Davit launched	: No
Locations (fwd/aft/port/stbd)	: Port/Stbd

L.8.3 Fast Rescue Boat

Make/type	: Ningbo New Marine /NM60r
Engine power	: 170hp

L.8.4 Personal Floatation Devices

Make/type : SUTAI
Quantity no. : 279

L.8.5 Survival Suits

Make/type : SUTAI
Quantity : 173

L.8.6 Life Ring Buoys

Make/type : SUTAI
Quantity total : 8X2.5Kg, 2X4Kg
- with lights : 6
- with smoke : 2
- with EPIRB : 0

L.8.7 Work Vests

Quantity : 0

L.8.8 Escape Ladder / Nets

Make/type : SUTAI
Quantity no. : 2 x Ladder (Port&Stbd)

SECTION M–POLLUTION PREVENTION EQUIPMENT**M.1 Sewage Treatment**

Make/model : JETS/MBR-150
 System type : Membrane

M.2 Garbage Compaction

Make/model : BRAMIPAN/Marine X/O
 System type : Electrical

M.3 Garbage Disposal / Grinder

Make/model : Dizhou-515
 System type : Electrical

M.4 Incinerator

Make/model : NA
 System/type : NA

M.5 Oily Water Separator

Quantity : 1
 Make/model : Hansun 45T-107
 Nominal throughput : 45 gpm
 System type : Coalescing