

Super M2

IADC LIST



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SECTION A. UNIT SPECIFICATIONS

Rig Type:	Jack Up/Self-elevation
Unit/Design/Shape:	Friede & Goldman, Super M2
Unit Flag:	TBD
Unit Classification:	ABS
IMO Certification:	IMO Resolution A 1023(26)
Which Code Version:	IMO MODU Code
2009 Amended (2010 Edition)	
Year of Keel-laying:	2013
Year of Delivery:	2015
Construction Yard:	TBD

CLASSIFICATION, RULES AND REGULATIONS

The vessel, including its hull, machinery and equipment, shall be built under the survey of class and shall be distinguished in the record by the notation of ✕ A1 Self-Elevating Drilling Unit ✕ CDS CPS CRC.

The following rules and regulations including their amendments set into force before signing of the contract with class to be applied during design and fabrication of the Self-Elevating Drilling Unit and its components:

-Maritime Safety Regulation of the Flag Authority

- ABS Rules for Mobile Offshore Drilling Units, 2012
- ABS Guide for the Classification of Drilling Systems, 2012
- International Convention of Load Lines 1966. Type B
- MARPOL 73/78, The International Convention for the Prevention of Marine Pollution from Ships, Annex I (Prevention of Pollution by Oil), Annex IV, (Prevention of pollution by Sewage), Annex V (Prevention of Pollution by Garbage), Annex VI (Prevention of Air Pollution).
- International Convention for the Safety of Life at Sea (SOLAS) Consolidated Edition 2001, including all amendments in force at the time of contract signing
- The International Convention of Tonnage Measurement of Ships 1969
- International Convention for the Prevention of Collision at Sea 1972 (COLREG 72)
- International convention on the control of harmful anti-fouling systems on ships 2001
- ILO No.92&133 Crew Accommodation
- IMO MODU Code 2009
- PSPC-Code
- International Association of Classification Societies (IACS) "Recommendation No. 47 (1996) – Part A – Shipbuilding and Repair Quality Standard for New Construction"
- Guide for certification of lifting appliances

A.1 MAIN DIMENSIONS/TECHNICAL DESCRIPTION

Light ship:	19824 kips(9000 metric tons)
Displacement at loadline:	11421Tonnes
Overall length of unit (including helideck):	272.5' (83.055meters)
Overall width of unit (including anchor racks):	200' (61meters)
Hull length:	196' (59.745 meters)
Hull width:	183' (55.78 meters)
Hull depth:	25' (7.62 meters)
Number of legs/length:	3 x 411ft (125.288 meters) including Spud Cans
Designed draft	17.0ft (5.172meters) Load Line Draft
Leg length available below hull:	360' (110 meters)
Type of leg:	Triangular
Leg spacing (centre to centre):	
Transverse:	120 ft(36.6meters)
Longitudinal:	115 ft (35.055 meters)
Independent leg or matt:	Independent leg
Spud can diameter/bearing area:	12.09 meters/ 108.62 square meter each
Spud can height:	15ft (4.572 meters)

Spud can jetting system:	1 system bottom & 1 system top - 2 total per can
Bottom jets	12 Nozzles, - 1000psi pressure
Top jets	12 Nozzles, 1000 psi pressure
Mat dimensions:	N/A
Length:	N/A
Width:	N/A
Depth:	N/A
Cantilever or slot:	Cantilever
Skid-off:	No
Cantilever envelope:	
Reach AFT, from/to:	0 ft / 50 ft
Transverse, port/STB:	15 ft / 15 ft
Slot dimensions:	
Length:	N/A
Width:	N/A
Mat slot dimensions:	
Length:	N/A
Width:	N/A
Max. cantilever load:	1,700kips at 50/0
combined (hook+ rotary + setback):	650kips at 50/15
Max. rotary load:	1,500 kips
Max. setback load:	750 kips
Fuel consumption (avg. drilling):	10m ³ /day
Accommodation for maximum No. personnel:	110 persons
See K.2.1.):	

A.2 STORAGE CAPACITIES

Diesel fuel:	22,177 ft ³ (628 m ³)
Lube oil:	265 ft ³ (7.5 m ³)
Drill water:	36,268 ft ³ (1,027 m ³)
Potable water:	13,136 ft ³ (372 m ³)
Mud Processing tank (see F.2):	1,091ft ³ (30.9 m ³)
Active liquid mud (see F.2):	12,868 ft ³ (364 m ³)
Independent oil base mud storage:	12,417 ft ³ (352m ³)In active/reserve pits
Agitated:	
Independent base oil storage:	5,049 ft ³ (143 m ³)
Independent brine storage:	5,049 ft ³ (143 m ³)
Heavy brine accepted (e.g. bromide):	N/A
Bulk bentonite/barite (see F.3):	204m ³
Bulk Cement (see F.3):	136m ³
Sack storage:	5,000 sacks
Pipe rack load capacity:	
- Cantilever beam pipe rack	272 tonne
- Main Deck pipe rack	622 tonne
Deck load capacity:	
Main deck	2.08 t/m ²
Main deck pipe rack	2.64 t/m ²
Cantilever beam deck	1.32 t/m ²
Cantilever beam deck pipe rack	2.64 t/m ²
Machinery deck	1.32 t/m ²
Drill floor	1.95 t/m ²
Set back	22.5 t/m ²
Mud pits	18ppg(2.16t/m ³)
Sack stores	2.64 t/m ²

Quarter's top deck	0.73 t/m ²
Helideck	0.21 t/m ² +9.3M.tons
Lifesaving deck	0.44 t/m ²
Center control room top	0.73 t/m ²
Preload capacity:	228,243 ft ³ (6,464 m ³)
Time to fill and dump preload:	N/A

A.3 JACKUP SYSTEMS

A.3.1 Jacking Systems

Make/type:	NOV-BLM / D60H/SUPER M2 and Friede & Goldman, Ltd. patented rack chock system, ARCOS
No. of jacking units	27 units
Maximum Normal jacking capacity:	880 kips/units
Maximum preload jacking capacity:	1140kips/units
Maximum static holding capacity:	1580kips/units
Maximum preload holding capacity:	2100kips/units
Maximum Jacking speed:	1.8ft/min
Rack chocks available:	Yes
Rack chock bearing capacity	8400 kips/chord
Required for field tow:	Yes
Required for ocean tow:	Yes

A.3.2 Raw Water Systems

Elevated: pump location (water tower or leg):	Tower type
Quantity:	3
Make/type:	Ritz
Capacity:	500m ³ /h/each
@ pressure:	@ 5 bar
Horsepower:	132KW
Afloat: Bilge/GEN.service pump(SB Sea chest):	
Quantity:	1
Make/type:	Azcue, Spain/ LN-VP-80-250
Capacity:	122m ³ /h
@ pressure:	@ 3 bar
Horsepower:	17kw
EM fire water pump(PS sea chest):	
Quantity:	1
Make/type:	Azcue, Spain/ VM-VP-80-20
Capacity:	160m ³ /h
@ pressure:	@ 7 bar
Horsepower:	52kw

A.3.3 Skidding Systems

A.3.3.1 Cantilever skidding unit

Quantity:	2
Make/model:	TSC/CSU2200-B
Static Breakout Capacity:	2200 kips (total)
Dynamic Capacity:	1800 kips (total)
Travel Speed (cyl speed):	1 ft/min (1 pump set working) 2 ft/min (2 pump sets working)
Mode of Travel:	Hydraulic Cylinder (double acting)
Direction Of Travel:	2 Way

A.3.3.2 Drillfloor skidding unit including control console

Quantity:	4
Make/model	TSC/DSU1600
Drillfloor mass	833T including setback and pipe weight Horizontal load to move 123Kn (28 kips) at each corner
Lift Load	400MT at each corner
Travel Speed (cyl speed)	1 ft/min
Direction of Travel	2 way

A.3.4 Corrosion Protection

Annodes Fitted/Type:	A11T-3 500*(110+130)*120mm A11H-6 500*100*40mm
Located in Spud Cans:	330 A11T-3 500*(110+130)*120mm
Located in Legs:	276 A11T-3 500*(110+130)*120mm
Located In Sea Chests	2 A11H-6 500*100*40mm
Impressed Current System Installed	No
Anti-Fouling System Fitted	Yes

A.4 OPERATIONAL CAPABILITIES

Maximum design water depth capability:	300 ft (91.44 meters)
Outfitted max/min water depth capability:	300/30 ft
Normal minimum water depth capability:	30 ft
Draft at load line (deepest):	17.0ft (5.172 meters)
Drilling depth capability (rated):	30,000 ft
Transit speed towed (historical avg):	The weather forecast for the period of the move does not include winds of over 36.01m/s (70 knots). If the winds are forecast to be greater than 36.01 m/s, the vessel should not be moved.
Leg (spud can) below hull in wet transit):	1.98m during field tow, 1.30m during ocean tow.
Maximum leg length permitted in tow:	
Ocean tow:	328.6ft(100.16m)
Field tow:	411ft (125.288m)
Number of tugs for field tow: [see N.1]	1
Associated minimum bollard pull per tug:	160T
Anti-roll system:	N/A
Maximum preload reaction per leg:	5,987 tonnes/leg
Bearing pressure at maximum preload:	55.13t/m ²
Thrusters:	N/A
Quantity:	N/A
Fixed/Azimuthing:	N/A
Total horsepower per thruster:	N/A

A.5 VARIABLE LOAD CAPACITY (V/L) (Exclusive of drilling loads)

Transit VL capacity:	3306kips(1500t)
Drilling VL capacity:	6784kips(3080t)
Survival VL capacity:	6000kips(2722t)
Jacking VL capacity:	3306kips(1500t)

A.6 ENVIRONMENTAL LIMITS

The Unit conform to environment condition in Gulf of Mexico	
Transit:	field transit (leg fully retracted)
Max. wave height:	N/A
Max. wave period:	N/A

Max. wind velocity: 36.01 m/s
 Max. current velocity: 1 knot(surface)
 Max. heave (double amplitude): N/A
 Max. pitch (double amplitude): 6 degrees single amplitude at the natural period of the unit, plus 120% of the gravity load at that angle of inclination
 Max. roll (double amplitude): 6 degrees single amplitude at the natural period of the unit, plus 120% of the gravity load at that angle of inclination

Working water depth:	300 ft	250ft
Drilling:		
Air gap (below bottom of main hull):	37 ft	44 ft
Max. wave height:	35 ft	35ft
Max. wave period:	13.5 sec	13.5sec
Max. wind velocity:	70Knots	70 Knots
Max. current velocity:		
-surface	0	0
-bottom	0	0
Spudcan corresponding penetration	10 ft	10 ft
Spud can corresponding bearing pressure intensity	55.13t/m ²	55.13t/m ²
Corresponding cantilever beam load	1,500 kips at hook	1,500 kips at hook
Corresponding variable load	7,500 kips	7,500 kips
Survival:		
Air gap (below bottom of main hull):	37ft	44ft
Max. wave height:	50 ft	54 ft
Max. wave period:	13.5 sec	13.5 sec
Max. wind velocity:	100 knots	100 knots
Max. current velocity:		
-surface	0	0
-bottom	0	0
Spudcan corresponding penetration	10 ft	10 ft
Spud can corresponding bearing pressure intensity	55.13t/m ²	55.13t/m ²
Corresponding cantilever beam load	0kips	0kips
Corresponding variable load	6000 kips	6000 kips
Includes: ABS Approved F&G's Calculation Methodology		

A.7 MOORING SYSTEM

A.7.1. Anchor Winches

Quantity: 4
 Make/Model: Nantong Liwei/DC-300E
 Type (electric/hydraulic/diesel): Electric
 Rated pull: 300KN

A.7.2 Anchor

Quantity: 4
 Make/type: JIANGSU YANGYUAN MARINE EQUIPMENT CASTING CO.LTD./ high holding power anchor-type JYS
 Weight: 3175Kg each

A.7.3 Anchors Line

Wire: steel rope
 Quantity (installed + spare): 4pcs
 Make/type:

Diameter: 42mm

Useful length (Nominal): 458m

A.7.4 Towing Gear

Towing bridle size: 8m* ϕ 66mm steel chain
Towing wire retrieval: 5Ton Air tugger winch
Rating: MBL.320T
Spare bridle: N/A

A.7.5 Supply Vessel Mooring System

System description: Bollard/Panama chock
Rating: MBL.70T
Location (port/stbd/both): Port/Starboard

A.7.6 Buoys

Quantity: 4
Make/type: Yantai Elite M&E Equipment Co., Ltd.
YTCB5000

A.8 MARINE LOADING HOSES

Location of loading manifolds (port/stbd/both): 2(port/stbd)
All the marine loading hoses will be provided by rig operator as below:

A.8.1 Potable Water Hoses N/A

Quantity:
Size:
Make/type:
Color coding:
Make/type connection:

A.8.2 Drilling Water Hose N/A

Quantity:
Size:
Make/type:
Color coding:
Make/type connection:

A.8.3 Diesel Oil Hose N/A

Quantity:
Size:
Make/type:
Color coding:
Make/type connection:

A.8.4 Mud Chemical Hoses N/A

Quantity:
Size:
Make/type:
Color coding:
Make/type connection:

A.8.5 Cement Hose N/A

Quantity:
Size:
Make/type:
Color coding:

Make/type connection:

A.8.6 Base Oil Hose N/A

Quantity:
Size:
Make/type:
Color coding:
Make/type connection:

A.8.7 Brine Hose N/A

Quantity:
Size:
Make/type:
Color coding:
Make/type connection:

A.8.8 Other N/A

Use:
Quantity:
Size:
Make/type:
Color coding:
Make/type connection:

A.9 CRANES, HOISTS, AND MATERIAL HANDLING

A.9.1 Cranes, Revolving

Quantity: 2
Specification (API, etc.)
One 120ft Boom length, Main hoist: 50T@8.7m, 6.5T@38.2m, diesel driven;
One 100ft Boom length, Main hoist : 50T@7.6m, 12T@32.1m, diesel driven;
Maker: TSC
Type: P10
Location (frwd/aft/port/stbd): Port./ Stb.
Boom length: 120ft/100ft
Hook load indicator automatically corrected for boom angle: Yes
Alarm (audible, visual, both): Yes
Automatic brake: Yes
Safety latch on hooks: Yes
Boom illumination: Yes

A.9.2 Forklift N/A

Quantity:
Make/type:
Rated capacity:
Explosion proof:

A.9.3 Monorail Overhead Cranes (Trolley & Chain Block)

Trolley

Make: Daekyung.co.ltd
Rated capacity(kg) and quantity: 2000x1sets
Rated capacity(kg) and quantity: 1000x2sets
Location: Engine room

Rated capacity(kg) and quantity: 8000x1sets
Location: Mud pump room

Chain block	
Make:	Daekyung.co.ltd
Rated capacity(kg) and quantity:	1000x2sets 2000x3sets 5000x3sets 8000x1sets
Location:	sack storage room/pump room,etc

A.9.4 Air Hoist/Derrick Winches

A.9.4.1 Rig Floor Winches (Non Man-riding)

Quantity:	2
Make:	Ansell Jones
Type:	5100KGS UTILITY AIR WINCH
Rated capacity:	50 kN (On top layer)
Wire diameter:	19mm
Automatic brake:	automatic“fail-safe” brakes
Overload protection:	Yes
Automatic spooling:	No/manual spooling

A.9.4.2 Monkey Board Work Winch

Quantity:	2
Make:	Ingersoll Rand
Type:	LS2-600R
Rated capacity:	600kg
Wire diameter:	Ø6.5mm
Automatic brake:	Yes
Overload protection:	Yes

A.9.4.3 Rig Floor “Man-Riding Winch”

Quantity:	1
Make:	Ingersoll Rand
Type:	FA150KGi/E13419
Rated capacity:	150Kg
Wire diameter:	10mm
Non-twisted wire:	YesAutomatic brake: Yes
Overload protection:	Yes
Automatic spooling:	No
Certified for man-riding:	Yes

A.9.4.4 Utility Winch (i.e. Deck Winch)

Quantity:	5
Make:	Ansell Jones
Type:	5100KGS *4; 2000KGS *1 UTILITY AIR WINCH
Rated capacity:	5,000Kg; 2,000Kg
Wire diameter:	19mm/12mm
Automatic brake:	automatic “fail-safe” brakes
Overload protection:	Yes
Automatic spooling:	No/manual spooling
Locations:	Cellar deck

A.9.4.5 BOP Hoists (See E.10.1)

A.9.5 Transfer Baskets/Containers

A.9.5.1 Personnel Transfer Net

Quantity:	2
Make/type:	Billy Pugh/X-871-6

A.9.5.2 Cargo Containers

Quantity:	N/A
-----------	-----

Make/type:

A.10 HELICOPTER LANDING DECK

Location (frwd/aft/port/stbd):	Forward
Dimensions:	72'-10"x 72'-10"(22.20m x22.20m)
Perimeter safety net:	Yes
Deck Load capacity:	0.21 Tonne/m ²
Maximum helicopter weight:	9.3ton per UK CAP 437
Designed for helicopter type:	Sikorsky S61N Helicopter
Tie down points:	Yes
Covered by foam fire system (see L.3.6):	Yes

A.10.1 Helicopter Refueling System

N/A

The helicopter refueling system will be provided by rig operator.

System make/type:

Fuel storage capacity:

Jettisonable:

Fuel transport container, quantity:

Volume:

Fuel transport containers:

Volume:

Covered by foam fire system (see L.3.6):

A.11 AUXILIARY EQUIPMENT

A.11.1 Water Maker

Quantity:

2

Make/type:

Hansun (shanghai) Marine Technology Co.Ltd/
RO type HSRO-40Aqua-Chem, Inc.
40T

Capacity (each/total):

Rehardening Water Filter((for water maker)

Quantity:

2

Type/make:

FiL-3/ Hansun (shanghai) Marine Technology
Co.Ltd

Volume :

150L

Capacity :

3 m3/h

UV- Sterilizer(for water maker)

Quantity:

2

Type/make:

JOWA UV 5/ Jowa AB

Capacity :

10.5 m3/h

A.11.2 Calorifier unit (Hot Water Heater)

Quantity:

2ea

Make:

Jowa AB

Capacity (total system):

750L/each(1500L)

A.11.3 Air Conditioning

Make/type:

Jiangsu/Yongsheng/MCW850

Capacity (total system):

850KW/each set

Max. temperature rating:

12/7 deg

A.11.4 Electric Welding Sets

Quantity:

2 ea

Current capacity:

400 Amp-AC

Make/model:

Miller/XMT 304

Type (fixed/portable):

Fixed

Welding Inlet Station:

Qty:

2

Location:
Welding Outlet Station:
Qty:
Location:

Welding Workshop on Main Deck

11
Mechanical workshop(qty:1)/Main
deck(qty:5)/Mud Pump RM(qty:1)/04
Deck(qty:1)/Cantilever(qty:1)/Engine
RM(qty:1)/ Drill floor(qty:1)

A.11.5 High Pressure Cleaner

The high pressure cleaner will be provided by shipyard.

Quantity:
Make/type:
Electric/pneumatic/diesel:
Max delivered pressure:
With steam:

1
portable
electric

Quantity:
Make/type:
Electric/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 Single Static Bottle Neck/ DK1500-A
Rated for wind speed	
With full set back:	Wind to 70 Knots with full setback load as per API
With No set back:	Wind to 100 Knots with 0 setback load as per API
Height:	160ft
Dimensions of base:	35 ft x 40 ft
Dimensions of crown:	18 ft x 18 ft
Static hook load:	680MT/1500KIPS
Maximum number of lines:	14
Ladders with safety cages and rests:	Yes
Platform for crown sheave access:	Yes
Counter balance system for rig tongs and pipe spinning tong:	Yes
Lightning system explosion proof:	No

B.1.2 Racking Platform

B.1.2.1 Drill Pipe Finger Board

Make/type:	TSC/integrated Derrick
Total current simultaneous capacity - drill pipe:	
Up to 5-1/2" DP:	220 stands
4" DP:	93 stands
8" DP:	6 stands
10" DP:	3 stands
11" DP:	1 stands

B.1.3 Automated Pipe Handling

B.1.3.1 Bridge Racker

Make/type:	TSC/ BRC10-A
Description:	The Bridge Racker is mounted in the derrick above the pipe stands. Its function is transporting of the drill string stands from the well centre to the setback / fingerboard – and vice versa

B.1.3.2 Catwalk Machine

N/A

B.1.3.3 Stand Arm

N/A

B.1.3. 4 Horizontal to Vertical Arm and Rails

N/A

B.1.4 Casing Stabbing Basket

Make/type:	TSC/ GA :CSB 250A
SWL	250kg
Adjustable:	Total length 9960mm
Telescopic stroke	3,700 mm
Operating radius	60° (in vertical)
Tilt angle	plus or minus 90° (in plane)
Safety Devices:	Rescue line in basket/Emergency stop

B.1.5 Substructure

Make/type:	CIMC-Raffles/NA
------------	-----------------

Drill floor height (above main deck):	10.530m
Length:	22.090m
Width:	14.935m
Setback capacity:	340MT
Simultaneous setback + hook-load capacity:	1021MT maximum
Clear height below rotary table beams(to main deck):	8.755m

B.1.6 Weather Proofing

Rig floor windbreaks:	Yes
Derrickman windbreaks:	Yes
Around process pits:	Yes

B.1.7 Derrick TV Camera System

Camera located at:	finger board, Three (3) Mud pump room, one (1) Drill floor , one (1) Shale shaker, one(1) Bridge racker, one (2) BOP Deck(1) Derrick V-door,one(1)
Make/type:	
Zoom/Pan/Tilt-function:	Yes(Cameras at Bridge Racker are fixed type)
Monitor located at:	Driller Console/ Derrickman console

B.2 DRAWWORKS AND ASSOCIATED EQUIPMENT

B.2.1 Drawworks

Make/type:	TSC/D3000
Motors make/type:	GE/5GEB28A
Quantity:	2
Rated input power:	2x1500HP
Drum type (grooved/smooth):	Lebus Grooved
For drill line size:	1-3/4"
Brake type (disk/drum):	AC regen. By AC Motors
Maximum line pull 14 lines:	638kN
Makeup cathead type:	N/A
Breakout cathead type:	N/A
Crown block safety devices:	Yes (Crown saver and floor saver, anti collision system)
Independent Sea water cooling system for drawworks:	Yes
Automatic driller:	Yes
Make/type:	TSC

B.2.2 Auxiliary Brake

Make:	TSC
Model:	Hydr disc. brake

B.2.3 Sandline

Make:	N/A
Length capacity:	N/A
Line size/type:	N/A

B.2.4 Wireline

Make/model:	N/A
-------------	-----

Wire length (Nominal):	N/A
Wire size:	N/A
Depth counter:	N/A
Pull indicator:	N/A

B.3 DERRICK HOISTING EQUIPMENT

B.3.1 Crown Block

Make/type:	TSC/18*18ft
Rated capacity:	1,500klbs
No. of sheaves:	6
Guide sheaves:	4
Sheave diameter:	60 inch
Sheave grooved for line size:	1-3/4 inch

B.3.2 Traveling Block

Make/type:	NOV/ 760TB750
Rated capacity:	1,500klbs
No. of sheaves:	7
Sheave diameter:	60 inch
Sheave grooved for line size:	1-3/4 inch

B.3.3 Hook (inapplicable)

Make/type:	N/A
Rated capacity:	N/A
Complete with spring assembly/hook locking device:	N/A

B.3.4 Swivel (inapplicable) N/A

B.3.5 Drilling Line

Diameter:	1-3/4 inch
Construction:	IWRC- According to API-spec.
Type	6X26 WS Grade EEIPS
Length (original):	7500 ft
Drilling line reel:	TSC DSP-7500
Drum cover:	Yes
Drilling line drum power driven:	Pneumatic
Spare drilling line:	N/A
Location (rig, shore, etc.):	N/A
Roller guides:	N/A

B.3.6 Dead Line Anchor

Make/type:	American Block/ 53150000
Weight sensor:	Yes
Deadline dampener:	N/A

B.3.7 Block Guidance System (System included in Top Drive Dolly)

Make/type:	NOV/ RETRACT
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B.4 ROTATING SYSTEM

B.4.1 Rotating Table

Make/type:	TSC / RT495H
Maximum opening:	49-1/2 inch

Rated Capacity:	1000 short ton
Two speed gearbox:	N/A
Emergency chain drive:	No
Hydraulic system maximum flow	350L/min
Hydraulic system highest pressure	21MPa
Drip pan/mud collection system:	Yes

B.4.2 Master Bushings

Make/type:	TSC
Insert bowls (see G.1.8): Adapter Ring:	OD49.5", ID37.5"
Muster Bushing	1ea
Insert Bowl No.1 for 13-3/8" and 11-3/4" casing	1ea
Insert Bowl No.2 for 10-3/4" and 9-5/8" casing	1ea
Insert Bowl No.3 for 8-5/8" and 2-3/8" casing	1ea
4 Hook Lifting slings for master bushing	1ea
2 Hook Lifting slings for split casing bushing	1ea
Casing bushing for 20" and 18-5/8" casing	1ea
Casing bushing for 24" casing	1ea
Casing bushing for 30" casing	1ea

B.4.3 Kelly Bushing (inapplicable)

Make/type:	N/A
Lock down assembly:	N/A

B.4.4 Top Drive

Make/Type (electric/hydraulic):	NOV / TDS-8SA (Electric)
Rated capacity:	750 Short tons
Test/working pressure: (psi/psi)	11,250 / 7,500
Output power:	1,150hp.
Gear ratio:	8.5:1
Continuous torque rating:	63,000ft-lb (84,475Nm) @ 94RPM
International torque rating:	95,000ft-lb (127,560Nm) @ 0 RPM
Maximum speed rating:	14,500ft-lb @ 270 RPM
Brake capacity:	96,000ft-lb (130,158Nm)
Two speed gear box:	N/A (VFD AC Driven)
Maximum rotary speed:	270 rpm
Remote operated kelly cock:	Yes
Cooling system type:	air
Upper inside BOP (see also D.1.15)	
Quantity:	2
Make/type:	NOV
Working pressure:	15,000 psi CWP
Max. OD body:	5"-8 1/2", (101.6-215.9mm)
Max. ID body:	9.7cm (3.82")
Connection type (box):	7-5/8" OU Reg RH Box

B.4.4.1 Top Drive Makeup/Breakout System

Make/type:	NOV / BX-100
Torque boost torque:	
Make-up:	0~95,000 ft-lbs, adjustable
Break out:	95,000 ft-lbs
Maximum connection B/O torque (make-up limit is operator adjustable)	95,000 ft-lbs, adjustable
Pipe handler orientation	unlimited, remote controlled
Diameter range	3-3/4"~6-5/8"

SECTION C - POWER SUPPLY SYSTEMS

C.1 RIG POWER PLANT

C.1.1 Diesel Engines

Quantity: 5
Make/type: Caterpillar/3516 C
Maximum continuous power: 1603kW/0.8 p.f.
At rotation speed of: 1200rpm
Equipped with spark arrestors: Yes
Mufflers installed: Yes

C.1.2 DC Generator (inapplicable)

N/A

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

C.1.3 AC Generator

Quantity: 5
Make/type: LEROY SOMER/SR4B
Continuous power: 1530KW
At rotation speed of: 1200rpm
Output volts: 600V

C.1.4 VFD System

Number of converter: 11
Make/type: Siemens S-120
Maximum continuous power (total): 1.06MW

C.1.5 Transformer System

Quantity: 2
Make/type: TSC / PSCBD Dry, Indoor
Continuous power (each): 2500KVa
Output volts: 600V/480V
Frequency: 60Hz

Quantity: 2
Make/type: TSC / CSD, Dry, Indoor
Continuous power (each): 400KVa
Output volts: 480V/230V
Frequency: 60Hz

Quantity: 1
Make/type: TSC / CSD, Dry, Indoor
Continuous power (each): 120kVA
Output volts: 480V/230V
Frequency: 60Hz

C.1.6 VFD Transformer System

Quantity: 2
Make/Type: TSC / PZSCBD, Dry, Indoor
Continuous power (each): 4000KVA
Output volts: 600V/2x638V
Frequency: 60Hz

Quantity:	2
Make/type:	TSC / CSD, Dry, Indoor
Continuous power (each):	63kVA
Output volts:	600V/638V
Frequency:	60Hz

C.1.7 Emergency Shutdown

Emergency shutdown pushbuttons for the ventilation system, fuel oil and lubricating oil system, AC generation system , located at the following points:

Drillers Cabin, Lifeboat station(only for emergency generator), Tool Pusher Office and Jacking Control Room

C.1.8 Compressed Air Systems

Air Compressors - Cold Start:

Quantity:	1
Make:	TMC
Model:	IHL2-77-90--105
Rated capacity:	55 m ³ /h
Working pressure:	8.6 bar
Prime mover (electric/diesel):	Diesel

Air Compressors - Medium Pressure (rig air):

Quantity:	2
Make:	Tamrotor Marine Compressors AS.
Model:	TMC150-10 EWA SW
Rated capacity:	1182 m ³ /h
Working pressure:	9bar
Prime mover (electric/diesel):	Electric
Continuous power:	138kw

Air dryers:

Quantity:	2
Make:	Tamrotor Marine Compressors AS.
Model:	TMC-RM1200
Rated Capacity:	1200 m ³ /h

Air Compressors - Low Pressure (bulk air):

Quantity:	1
Make:	Tamrotor Marine Compressors AS.
Model:	TMC150-10 EWA SW
Rated capacity:	1180 m ³ /h
Working pressure:	9bar
Prime mover (electric/diesel):	Electric
Continuous power:	138kw

Air dryers:

Quantity:	1
Make:	Tamrotor Marine Compressors AS.
Model:	TMC-A1200
Rated Capacity:	1215 m ³ /h

C.1.9 Air Receivers

Quantity:	2 ea(for main engine and service)
Volume (total):	8 CM
Design Pressure:	1.0Mpa
Location:	Auxiliary room

Quantity:	1(bulk air surge tank)
Volume (total):	1.28CM

Design Pressure:	0.8 Mpa
Location	Main deck
Quantity:	1
Volume (total):	3.2m ³
Design Pressure:	1 Mpa
Location	Drill floor

C.2 EMERGENCY GENERATOR

C.2.1 Engine

Quantity:	1
Make/type:	Caterpillar/CAT C32
Maximum output:	620kW
At rotation speed:	1800rpm
Automatic starting:	Yes
Starting methods (air, hydraulic, battery):	Battery + Air
Max. angle of operation:	As per ABS rule specified

C.2.2 AC – Generator

Quantity:	1
Make/type:	LEROY SOMER / SR5
Maximum output:	710KW/0.8 p.f.
At rotation speed:	1800rpm
Output:	480V

C.2.3 All consumers to be specified as per ABS rules and regulations

1. Helideck foam system control box
2. Bulk air dryer control box
3. Supply fan emergency generator room
4. Diesel oil service pump
5. Fire water pump
6. BOP control unit
7. Pump starter panel for sprinkler system
8. 30KVA UPS
9. Emergency lighting/small power load transformer
10. Bulk air compressor control panel
11. Submersible pump control panel-STBD
12. Deluge Foam Pump

SECTION D- DRILLSTRING EQUIPMENT	N/A
D.1 TUBULARS	N/A
D.1.1 Kellies	N/A
Kelly:	
Size:	
Type:	
Quantity:	
Length:	
Top connection:	
Bottom Connection: OD:	
D.1.2 Kelly Saver Subs/TDS saver Sub	
TDS saver Sub	
Quantity:	2
Connection type:	6-5/8" Full Hole(FH)
Protector(Y/N):	No
Kelly saver Sub	
Quantity:	N/A
Connection type:	N/A
Protector(Y/N):	N/A
D.1.3 Drill pipe	N/A
Drill pipe OD(in):	
Maker:	
Grade:	
Quantity:	
Total length(ft):	
Range:	
Weight(lbs/ft):	
Internally plastic coatedv(Y/N):	
Tool joint OD/ ID(in/in):	
Tool joint pin length box /pin(original):	
Tapered shoulder tool joints (box/pins):	
Connection type:	
Type of hardfacing:	
API Classification:	
Thread protectors(Y/N):	
D.1.4 Drill pipe Pup Joints	N/A
Drill pipe OD(in):	
Maker:	
Tool joint OD/ ID(in/in):	
Grade:	
Quantity:	
Length(ft):	
Connection type:	
Internally plastic coated(Y/N):	
API Classification:	
Thread protectors(Y/N):	
D.1.5 Drill pipe Casing Protectors	N/A
Initial stock:	
Maker/Type:	
OD(inch):	
Internally Tools(manual/hydraulic/none):	
D.1.6 Hevi-Wate Drill Pipe	N/A

Quantity:
Maker:
Nominal size OD(in):
Weight(lbs/ft):
Range:
Tool joint OD(in):
Tool joint ID(in):
Type of hard facing:
Internally plastic coated(Y/N):
Connection type:
Thread protectors(Y/N):

D.1.7 Drill Collars

N/A

Quantity:
OD body(inch):
ID body(in):
Average Length of each joint(ft):
Drill collar body(slick/spiral):
Recess for "zip" elevator(Y/N):
Recess for slips(Y/N):
Stress relief pin groove(Y/N):
Bore back on box(Y/N):
Connection type:

D.1.8 Short Drill Collars

N/A

Quantity:
OD body(inch):
ID body(in):
Nominal Length of each joint(ft):
Stress relief pin groove(Y/N):
Bore back on box(Y/N):
Connection type:

D.1.9 Non-Magnetic Drill Collars

N/A

D.1.10 Core Barrels

N/A

D.1.11 Stabilizers

N/A

Hole size(in):
Quantity:
Maker:
OD blands(in):
Type blade(straight/spiral; welded/integral/sleeve):
Type of blade hard facing:

OD body for fishing neck(in):
ID body(in):
Length(ft):
Connection type:
Float valve receptacle(Y/N):

D.1.12 Roller Reamers

N/A

D.1.13 Shock absorbers

N/A

D.1.14 Drilling Jars

N/A

Quantity:
Maker:
Type(mechanical/hydraulic) up/down:

OD body(inch):
 Min. ID body(in):
 OD fishing neck(in):
 Stroke(in):
 Connection type:

D.1.15 Inside BOP Valve

remote operated dual crank upper IBOP 1
 manually operated lower IBOP 1

D.1.16 Fast Shut-Off Coupling N/A

D.1.17 Circulation Head N/A

Quantity:
 Maker/Type:
 Bottom connection type:
 Top connection type:
 Wire line stripper(Y/N):
 Working pressure(psi):

D.1.18 Kelly Cocks N/A

Upper:
 Quantity:
 Maker/Type:
 Working Pressure(psi):
 Max OD body(in):
 Min OD body(in):
 Connection type:

Lower:
 Quantity:
 Maker/Type:
 Working Pressure(psi):
 Max OD body(in):
 Min OD body(in):
 Connection type:
 Used as full open safety valve(Y/N):

D.1.19 Circulation Subs N/A

Quantity:
 Maker/Type:
 OD body(in):
 Ball size(in):
 Dressing kits:
 Connection type:

D.1.20 Cup Type Testers N/A

Quantity:
 Maker:
 Size(in):
 Test cup for casing weight(lb/ft):
 Test cup for casing weight(lb/ft):
 Test cup for casing weight(lb/ft):
 Connection type:

D.1.21 Plug Type Testers N/A

D.1.22 Drop-In Valve N/A

Quantity:
Maker/type:
Size(in):
For Nom. OD drill pipe(in):
Max. OD of dart.(in):

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

N/A

Quantity:
OD size(inch):
ID size(inch):
Top connection:
Bottom connection:
Bored for float valve(Y/N):
Float size(inch):

D.1.24 Crossover Subs

Quantity:	1
OD size(in/in) Max/Min:	7-5/8"
ID size(inch):	3.82"
Top connection size:	4-1/2"
Type(pin/box):	BOX
Bottom connection size:	7-5/8"
Type(pin/box):	BOX

D.1.25 Drilling Bumper Subs

N/A

D.1.26 Hole Openers

N/A

Quantity:
Hole size(inch):
Body OD(inch):
Body ID(inch):
Length(in):
Bottom connection size:
Type(pin/box):

D.1.27 Under Reamer

N/A

D.2 HANDLING TOOLS

N/A

D.2.1 Drill Pipe Elevators

N/A

Quantity:
Maker/type:
Size(in):
Model:
Rated capacity:

D.2.2 Drill Collar Elevators

N/A

Quantity:
Maker/type:
Size(in):
Model:
Rated capacity:

D.2.3 Tubing Elevators

N/A

D.2.4 Drill Pipe Hand Slips

N/A

Quantity:
Maker/type:

Size(in):

D.2.5 Semi-Automatic DP Slips

Quantity: 1
Maker/type: B&V / PS-750/2
Size(Largest/Smallest): 22" casing/ 2.3/8" Tubing

D.2.6 Drill Collar Slips N/A

Quantity:
Maker/type:
Size Range(in):

D.2.7 Drill Collar Safety Clamps N/A

Quantity:
Range(in/in):

D.2.8 Tubing Slips N/A

D.2.9 Tubing Spider N/A

D.2.10 Drill Collar Lifting Subs N/A

Quantity:
For DC OD(inch):
Connection type:

D.2.11 DC Lifting Plugs N/A

D.2.12 Bit Breakers N/A

Quantity:
For bit size(inch):

D.2.13 Elevator Links N/A

Quantity of sets:
Maker/type:
Size(in):
Length(in):
Rated capacity:

D.2.14 Kelly Spinner N/A

Model:
Rated Speed(r/min):
Power(HP):
Rated Pressure(MPa):
Air consumption(m³ /min):
Air inlet(in):
Rated Spinning speed(r /min):
Max. Spinning torque:

D.2.15 Drill Pipe Spinner N/A

D.2.16 Mud Saver Bucket N/A

Maker:
Size(in):

D.2.17 Hydraulic Makeup/Breakout(EZ Torque) N/A

Quantity of sets:
Maker/type:
Max. line pull:

D.2.18 Rotary Rig Tongs **N/A**

Quantity of sets:
Maker/type:
Range Size(max OD/min OD):
Torque Rating(ft-lbs):

D.2.19 Tubing Tongs(manual) **N/A**

D.2.20 Tubing Tongs(power) **N/A**

D.2.21 Iron Roughneck

Quantity: 1
Maker/type: NOV / ST-120
Range Size(max OD/min OD): 10" – 3 1/2"
Max. makeup Torque (ft-lbs): 135,582 Nm(100,000ft.lb)
Max. breakout Torque (ft-lbs): 162,698 Nm(120,000ft.lb)

D.2.22 Drill Pipe Drift **N/A**

Quantity of sets:
Range Size(in):
Weight:

D.3 FISHING EQUIPMENT **N/A**

D.3.1 Over shots **N/A**

Quantity:
Maker/type:
Over shot OD(in):
To catch size(in):
To catch size(in):
To catch size(in):
Over shot guide OD(in):
Extension Sub Length(ft):
Lipped guide(oversize, regular):
Grapples(spiral, basket, both):
Pack offs(Y/N):
Top sub connection type:

D.3.2 Hydraulic Fishing Jar **N/A**

Quantity:
Maker/type:
OD body(in):
Min. ID(in):
Stoke(in):
Repair Kit(Y/N):
Connection type:

D.3.3 Jar intensifier **N/A**

D.3.4 Surface Jar **N/A**

D.3.5 Fishing Bumper Subs **N/A**

Quantity:
Maker/type:

OD body(in):
Min. ID(in):
Stoke(in):
Connection type:

D.3.6 Safety Joints **N/A**

Quantity:
Maker/type:
OD body(in):
Min. ID(in):
Connection type:

D.3.7 Junk Baskets(Reverse Circulation) **N/A**

Quantity:
Maker/type:
For hole size(in):
OD body(in):
Connection type:
Inside magnet available:
Mill shoes type(A, B, C):

D.3.8 Junk Subs **N/A**

Quantity:
Maker/type:
For hole size(in):
OD body(in):
Connection type:

D.3.9 Flat Bottom Junk Mill **N/A**

Quantity:
Maker/type:
For hole size(in):
OD flat mill(in):
Connection type:

D.3.10 Magnet Fishing Tools **N/A**

D.3.11 Taper Taps **N/A**

D.3.12 Die Collars **N/A**

D.3.13 ITCO Type Junk Basket **N/A**

Quantity:
Maker:
Hole size(in):
OD of shoe(in):
OD of Barrel(in):
Connection:

D.3.14 Economill **N/A**

Quantity:
Maker:
Hole size(in):
Dressed Diameter(in):
Overall Length(in):
Connection:

D.3.15 Ditch Magnet **N/A**

Quantity:
Maker/Model:
Length(in):

SECTION E - WELL CONTROL/SUBSEA EQUIPMENT

E.1 DIVERTER

Fixed:	
Make/type:	GE VG/ KFDJ49.5
Maximum bore:	47"
ID of insert packer:	10" , ,17 3/4",22"
Working pressure:	500PSI
Annular:	N/A
Make/type:	N/A
Maximum bore:	N/A
Working pressure:	N/A
Bottom connection:	32" EC-6 Pin with thread protector
Rams:	N/A
Make/type:	
Ram packer type:	
Ram packer type:	
Max bore size:	
Working pressure:	
Bottom connection:	
Size:	
Number of diverter outlets:	6 pcs
Outlet OD (Nominal):	2X12", 1X14", 3X4"

E.1.1 Diverter Flow Lines

Quantity:	4
Nominal size of flow lines:	14" ,12" ,4"
Running from diverter to:	mud ditch, portside ,stabside,
Valve make/type:	ball valve
Quantity:	4
Size:	14" ,12" ,4"
Working pressure:	500PSI
Valve operator (air hydraulic):	hydraulic
Valve make/type:	GE/ball valve

E.1.2 Diverter Control Panel

Primary make/type:	CAD/ DIV26100441
Location:	Inside of the Cantilever
Remote make/type:	CAD / ERM-PBF18FSP2510-F
Location:	DCR
Remote make/type:	CAD/ ERI-H19FCS2FCS2F OIM
Location:	Tool pusher office

E.2 LOW PRESSURE BLOWOUT PREVENTERS

All appropriate components H₂S rated

E.2.1 Ram Type Preventers

Quantity:	1
Make/model:	CAMERON
Type (single/double/triple):	double+single
Size:	21 1/4"
Working pressure:	2000psi
Ram locks:	Yes
Type (manual/hydraulic):	manual

H2S service:	Yes
Side outlets:	
Size: 3-1/16"	
WP:	15000psi
Bottom connection:	flange
Top connection:	Stud
Shear ram boosters:	N.A

E.2.2 Available Rams (Installed & Spare)

1 set of 7" ,13 3/8" casing ,5 1/2" ,5" pipe

E.2.3 BOP Ram Configuration (Normal)

Upper:	5 1/2"
Middle Upper:	blind shear
Middle Lower:	N.A
Lower:	7"

E.2.4 Annular Preventer

Quantity:	1
Make/type	CAMERON / DL ANNULAR
Size:	21 1/4"
Working pressure:	2000psi
Bottom connection:	Stud
Top connection:	Flange

E.2.5 Kill Line Valves

Quantity:	1 ea manual & 1 ea hydraulic operated gate
valve Make/type:	CAMERON
Size:	3-1/16"
Working pressure:	15000PSI
Gasket type:	BX-154
Hydraulic/manual/Non-return:	Yes

E.2.6 Choke Line Valves

Quantity:	1 ea manual & 1 ea hydraulic operated gate valve
Make/type:	CAMERON
Size:	3-1/16"
Working pressure:	15000PSI
Gasket type:	BX-154
Hydraulic/manual:	Yes

E.3 HIGH PRESSURE BLOWOUT PREVENTERS

All appropriate components H ₂ S rated	Yes
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E.3.1 Ram Type Preventers

Quantity:	1
Make/model:	CAMERON / U-TYPE
Type (single/double/triple):	Double
Size:	13-5/8 inch
Working pressure:	15,000 psi
Ram locks:	Yes
Type (manual/hydraulic):	manual
H ₂ S service:	Yes
Side Outlets:	Yes
Size:	3-1/16"
WP:	15,000 psi
Bottom connection:	Flange

Top connection:	Stud
Shear ram boosters:	YES
Quantity:	1
Make/model:	CAMERON / U-TYPE
Type (single/double/triple):	Single
Size:	13-5/8 inch
Working pressure:	15,000 psi
Ram locks:	Yes
Type (manual/hydraulic):	manual
H2S service:	Yes
Side outlets:	Yes
Size:	3-1/16"
WP:	15,000 psi
Bottom connection:	Flange
Top connection:	Stud
Shear ram boosters:	No

E.3.2 Available Rams (Installed & Spare)

2 sets of 3-1/2" , , 5" 5 1/2" , 1 set of 7" 9 5/8"

E.3.3 BOP Ram Configuration (Normal)

Cameron type are provided for all ram preventors

Upper:	5 1/2"
Upper Middle:	Blind Shear
Lower:	7"

E.3.4 Annular Preventer

Quantity:	1
Make/type:	CAMERON /DL Annular
Size:	13-5/8 inch
Working pressure:	10,000psi
Bottom connection:	flange
Top connection:	Stud

E.3.5 Kill Line Valves

Quantity:	1 ea manual & 1 ea hydraulic operated gate
valve	
Make/type:	Cameron
Size:	3-1/16"
Working pressure:	15000PSI
Gasket type:	BX-154
Hydraulic/manual/Non-return:	Yes

E.3.6 Choke Line Valves

Quantity:	1 ea manual & 1 ea hydraulic operated gate
valve	
Make/type:	Cameron
Size:	3-1/16"
Working pressure:	15000PSI
Gasket type:	BX-154
Hydraulic/manual:	Yes

E.4 OTHER BLOWOUT PREVENTERS N/A

All appropriate components H₂S rated

E.5 BOP CONTROL SYSTEM

E.5.1 Accumulator Unit

Make/model:	CAD / RSM-600-B3AC
Location:	Inside of Cantilever
Fluid reservoir capacity:	600GAL
Oil/water mix. rate:	N/A
Glycol reservoir capacity:	N/A
Total accumulator capacity/w/o precharge):	24x15 gallons
System working pressure:	3,000psi
Control manifold model:	HMM-721810E2E2D6-F

E.5.2 Accumulator Hydraulic Pumps

Electric Driven	
Quantity:	2
Make/model:	CAD/EPM-P68V078BBD1
Each driven by motor of power:	50 HP
Flow rate of each pump:	20Gal /min
At operating pressure:	3,000 psi
Operable off emergency generator:	Yes
Air Driven:	
Quantity:	N/A

E.5.3 Primary Control Panel

Control panel make/model:	CAD / ERI-P08FCS10
Location:	Inside cantilever middle platform
Panel controls for the following functions:	
All annular BOPs:	Yes
All ram BOPs:	Yes
Lock for ram BOPs:	No
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:	No
Pressure regulator for annular:	Yes
Flowmeter:	Yes/
Quantity of pressure gauges:	5 ea
Other control functions:	N/A

E.5.4 Remote Control Panels

Make/model:	CAD/ ERM-PBF18FSP2510-F
Location:	Toolpusher office
Location:	
Ability to operate main closing unit valves directly:	Yes
System routing (direct or through panel):	through pane
Remote control of - system pressure regulator:	No
Remote control of - annular pressure regulator:	Yes

E.6 CHOKE MANIFOLD

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

E.6.1 Choke Manifold (For instrumentation, see H.3)

Nominal size:	3-1/16"
Minimum ID:	3-1/16"
Maximum WP:	15,000psi

Quantity of fixed chokes:	0
Make/model:	N/A
Size (ID):	N/A
Make/model:	N/A
Size:	N/A
Quantity of adjustable chokes	2
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:	
Make/model:	WOM
Location:	Driller's Cabin
Glycol injection:	N/A

E.7 FLEXIBLE CHOKE & KILL LINES
(BOP to MANIFOLD)

Quantity:	1 for kill line
Make/type:	Technip
ID:	3-1/16"
Working pressure:	15000PSI
H2S service:	YES

Quantity:	1 for choke line
Make/type:	Technip
ID:	3-1/16"
Working pressure:	15000PSI
H ₂ S service:	YES

E.8 FLEXIBLE BOP CONTROL HOSES

Quantity:	14 ea
Make:	GATE
ID:	1" With stainless steel cover
Working pressure:	3,000psi
Fire resistant:	Yes

E.9 BOP TESTING EQUIPMENT

E.9.1 Hydraulic BOP Test Pump

Make/model:	CAMERON
Type:	pneumatic piston pump
Pressure rating:	22500psi

Chart recorder:	Yes
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E.9.2 BOP Test Stump

Size:	13-5/8" and 21-1/4"
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E.10 BOP HANDLING

E.10.1 BOP Hoist System

Make/type:	TSC/ 2x BOXER chain hoists BCH75-A
Quantity of hoists:	2
Number of lift points on BOP:	2 on lifting ring,
System safe working load (max BOP wt)	75 MT each

SECTION F - MUD SYSTEM/BULK SYSTEM

F.1 HIGH PRESSURE MUD SYSTEM

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

F.1.1 Mud Pumps

Quantity: 3
Make: TSC
Model: WF2000 triplex mud pump
Type (triplex/duplex): Triplex
Mud pump drive motors/pump: 2
Motor type: YJ motor,800Kw,600VAC
Maximum working pressure: 7,500psi
Test pressure: 11,250psi
Pump stroke counter type: supersonic
Discharge/suction line ID: 4" (ID)& 12"(DN) for mud pump
Mud pump pulsation dampener type: diagram Nitrogen type
Reset Relief Valve: 3" Reset Relief Valve
Working flowrate per pump at 90% of max spm:
Liner size: 5" to 7-1/4"

F.1.2 Transfer Pump/Mixing Pumps

Charging Pumps

Quantity: 3
Make/model: HSB8*6*14
Output capacity: 220m3/h
Drive motor type: ex type AC motor
Power output: 75kW

Mixing pump
See F.3.4 feed pump

Transfer pump brine transfer

Quantity: 1
Make/model: HSB8*6*14
Output capacity: 220m3/h
Drive motor type: ex type AC motor
Power output: 75kW

Transfer pump base oil transfer

Quantity: 1
Make/model: Azcue, Spain/ BT-LV90T
Output capacity: 45m3/h
Drive motor type: ABB motor
Power output: 12.6kW

F.1.3 Booster Pump

Quantity:
Make/model:
Output capacity:
Drive motor type:
Power output:

N/A

F.1.4 Standpipe Manifold

Quantity of standpipes: 1 ea
Standpipe/ID: 4-1/16"
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 ea
Make/type:	tech flow or equivalent
ID x length:	4" x27m
Working pressure:	7,500psi

F.1.6 Cementing Hose

Quantity:	1 ea
Type (armor sheath/flexible steel pipe):	Flexible hose
Length:	13 m
ID:	3"
Working pressure:	15000psi

F.1.7 High Pressure Flexible Steel Pipe **N/A**

F.2 LOW PRESSURE MUD SYSTEM

F.2.1 Mud Processing Tank

Sand trap tank volume:	5.5m ³ ea
Degasser tank volume	7m ³ ea
Desander tank/ Desilter tank/ Centrifuge tank volume:	6m ³ ea
Clean tank volume:	6m ³
Total capacity:	24.5m ³

F.2.2 Mud Tanks

Quantity:	8
Total capacity (actual):	716 m ³
Total capacity (usable):	640 m ³
Actual capacity No. 1:	83m ³
Usable capacity No. 1:	75m ³
Type (active/reserve):	active
Height (actual):	3.45m
Height (usable):	2.75m
Mixer:	1
Mud guns:	2

Actual capacity No. 2:	83m ³
Usable capacity No. 2:	75m ³
Type (active/reserve):	active
Height (actual):	3.45m
Height (usable):	2.75m
Mixer:	1
Mud guns:	2

Actual capacity No.3:	84m ³
Usable capacity No. 3:	76m ³
Type (active/reserve):	reserve
Height (actual):	3.45m
Height (usable):	2.75m
Mixer:	1
Mud guns:	2

Actual capacity No. 4:	84m ³
Usable capacity No. 4:	76m ³
Type (active/reserve):	reserve
Height (actual):	3.45m
Height (usable):	2.75m

Mixer:	1
Mud guns:	2
Actual capacity No. 5:	99m3
Usable capacity No. 5:	90m3
Type (active/reserve):	active
Height (actual):	3.45m
Height (usable):	2.75m
Mixer:	1
Mud guns:	2
Actual capacity No.6:	99m3
Usable capacity No. 6:	90m3
Type (active/reserve):	active
Height (actual):	3.45m
Height (usable):	2.75m
Mixer:	1
Mud guns:	2
Actual capacity No.7:	92m3
Usable capacity No. 7:	83m3
Type (active/reserve):	reserve
Height (actual):	3.45m
Height (usable):	2.75m
Mixer:	1
Mud guns:	2
Actual capacity No.8:	92m3
Usable capacity No. 8:	83m3
Type (active/reserve):	reserve
Height (actual):	3.45m
Height (usable):	2.75m
Mixer:	1
Mud guns:	2

F.2.3 Slug Tank

Capacity (actual):	10 m3
Capacity (usable):	9 m3
Mud agitator:	1
Mud guns:	1

F.2.4 Trip/Stripping Tanks

Trip Tanks

Capacity (usable):	2x4m3
--------------------	-------

Stripping Tanks

Capacity (usable):	4.6bbbls
--------------------	----------

Level transmitter:

1

Electric pump make:

TSC

Model/type:

HCP4x3x13

Rated capacity:

70m³/h

Alarm and strip chart recorder:

N/A

F.2.5 Chemical Mixing Tank

N/A

Capacity (Usable):

Chemical mixer type:

F.2.6 Shale Shakers:

Primary:

Quantity:	3
Make:	MISWACO
Type:	MD-3
Output Force	6.3Gs Normal; 7.2Gs Capacity
Gross Screen Area	76.2ft ² [7.05m ²]
Scalping Deck	25.4ft ² [2.35m ²]
Primary Deck	50.8ft ² [4.72m ²]

F.2.7 Mud Cleaner: NA

Quantity:
 Make/model:
 Type:
 Nominal flow rate:
 Feed pump make/model Size:
 Capacity:
 Drive motor:

F.2.8 Mud/Gas Separator (Poor Boy)

Capacity:	250—300m ³ /h
Working efficiency:	85%--90%
Design pressure:	1.0MPa

F.2.9 Degasser:

Quantity:	1
Make/type:	MISWACO /CD-1400 VERTICAL D-GASSER
Nominal flow rate:	N/A
Feed pump make/model:	N/A
Type/size:	N/A
Capacity:	
Drive motor hp:	Is pump dedicated to degasser:
Vacuum pump motor:	N/A

F.2.10 Mud Agitators

Quantity:	8
Make/model:	TSC/ HAV-30
Driven by motor of power:	30KW
Quantity:	1
Make/model:	TSC/HAV-4
Driven by motor of power:	4KW

F.2.11 Mud Centrifuge

Quantity:	N/A
Make/model:	N/A
Speed Centrifuge;	
Feed pump for medium speed centrifuge make/model:	N/A
Type/size:	N/A
Drive motor:	N/A
Is feed pump dedicated to centrifuge(s)	N/A
Quantity:	N/A
Make/model:	N/A
Speed Centrifuge.	
Feed pump for high speed centrifuge make/model:	N/A
Type/size:	N/A
Capacity:	N/A
Drive motor:	N/A
Is feed pump dedicated to centrifuge(s)	N/A

F.2.12 Mud Laboratory and Facilities

N/A

Separate room:	N/A
Equipped with:	
Mud balance:	N/A
Marsh funnel:	N/A
Filtration Kit:	N/A
Sand content kit:	N/A
Air conditioning:	N/A
Positive pressure:	No

F.3 BULK SYSTEM

F.3.1 Barite/Bentonite Silos

Quantity:	3
Capacity of each silo:	68 m3
Locations:	Main Deck
Type weight loadcell:	electronic
Manufacturer:	TSC
Pressure rating:	0.45MPa
Relief valve(s) installed:	Yes

F.3.2. Cement Silos

Quantity:	2
Capacity:	68 m3
Locations:	Main Deck
Type weight loadcell:	electronic
Manufacturer:	TSC
Pressure rating:	0.45MPa
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:	2.2m3
Type weight loadcell:	1
Manufacturer:	TSC
Pressure rating:	0.15MPa
Relief valve(s) installed:	Yes

F.3.4 Mud Hopper

Quantity:	3
Make:	TSC
Feed pump make/model:	TSC
Type/size:	HJM200
Capacity:	200m ³ /h

F.3.5 Surge Tank for Cement N/A

Quantity:	
Capacity of each tank:	
Type weight loadcell:	
Manufacturer:	
Pressure rating:	

F.3.6 Bulk Transfer System (See Also C.1.7 - 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

SECTION G - CASING/CEMENTING EQUIPMENT

Type and quantity of tools will be provided as client requirement

G.1 CASING EQUIPMENT N/A

G.1.1 Drive Hammer N/A

Make/type:
Maximum casing/conductor OD:

G.1.2 API Casing Drifts N/A

For Casing OD, Weight, Quantity(in/lbs/ft/No):
For Casing OD, Weight, Quantity(in/lbs/ft/No):
For Casing OD, Weight, Quantity(in/lbs/ft/No):

G.1.3 Clamp-On Type Casing Protector N/A

For Casing OD, Quantity(in /No):
For Casing OD, Quantity(in /No):
For Casing OD, Quantity(in /No):

G.1.4 Side Door Casing Elevator N/A

Quantity:
For OD Casing(in):
Maker/Type:
Capacity:

G.1.5 Single Joint Elevators N/A

Quantity:
For OD Casing(in):
Maker/Type:

G.1.6 Slip Type Elevator/Spiders N/A

Quantity:
Maker/Type:
Pneumatic/Manual:
Capacity:
Slips for OD Casing sizes(in):
Maker/Type:

G.1.7 Casing Slips N/A

Quantity:
Maker/Type:
For OD Casing(in):

G.1.8 Casing Bowls N/A

See B.4.2
Quantity:
Maker/Type:
For OD Casing(max/min):

G.1.9 Manual Casing Tongs N/A

Quantity(sets):
Maker/Type:
W/jaws for OD Casing(max/min):

G.1.10 Power Casing Tongs **N/A**

Quantity:
Make/type:
W/jaws for OD casing (max/min):
Max output torque:
Torque indicator:
Back-up arm:

G.1.11 Power Unit For Casing & Tubing Tongs **N/A**

Quantity:
Make/type:
Capacity (ea):
Output pressure:
Dedicated unit:

G.1.12 Casing Circulating head(Swedge) **N/A**

For OD casing(psi):
Type of connection:

For OD casing(psi):
Type of connection:

G.1.13 Casing Spears (Internal) **N/A**

Quantity:
Make/type:
For OD casing:
For casing weight:
Pack-off:

G.1.14 Casing Cutters (Internal) **N/A**

Quantity:
Make/type:
For OD casing (max/min):

G.1.15 Crossover to handle Casing with Drill Pipe **N/A**

Quantity:
For OD casing (in):
Casing connection type:
Drill pipe connection type:
Rated capacity:

G.1.16 Casing Scrapers **N/A**

Quantity:
Maker:
For OD casing (in):
For Casing weight(lbs/ft):
OD body(in):
Connection type:
Blade type(roller/fixed):

G.2 CEMENTING EQUIPMENT

G.2.1 Cementing Unit **N/A**

Free placement basis(Y/N):
Maker/type:

No. of triplex pumps:
 Max. working pressure(psi):
 Max. flow rate total(bbl/min):
 Unit powered by electric or diesel:
 Recirculating mixing system(Y/N):
 Capacity(bbl):
 Motor power(hp):
 Liquid additive system(Y/N):
 Premix/batch tank(U.S. gals/min):
 Quantity:
 Total capacity(bbl):
 Pressure recorder(Y/N):
 Desionmeter recording device(Y/N):

G.2.2 Cementing Manifold

Discharge manifold working pressure: 15,000psi
 Cement pump discharge lines min. ID: 3-1/16"
 Cement pump disc. lines work. pressure: 15,000psi
 Manifold safety pressure relief valve: No

G.2.3 Cementing Standpipe

Quantity: 1
 Working pressure: 15,000psi
 ID: 3-1/16"
 Connection to choke manifold: Yes
 Connection to standpipe manifold: Yes/

G.2.4 Cementing Kelly

N/A

Quantity:
 Nominal size OD:
 Total length:
 Working length:
 Connection type:
 Cement head:

G.2.5 Cementing Tubing

N/A

Size:
 Length (total):
 X-overs to drill pipe specified in section D.1.3:

SECTION H - INSTRUMENT/COMMUNICATION

H.1 DRILLING INSTRUMENTATION AT DRILLER'S POSITION

H.1.1 Weight Indicator

Sensor type: E551 Compression

H.1.2 Standpipe Pressure Gauges

Quantity: 2
Make/type:
Maximum pressure reading: 10,000psi

H.1.3 Choke Manifold Pressure Gauges

Quantity: 2
Make/type:
Maximum pressure reading: 15Kpsi

H.1.4 Rotary Instrumentation

H.1.4.1 Tachometer

Make/type: Truck /PROXY SWITCH
Maximum RPM: 20

H.1.4.2 Torque Indicator

Make/type: HYDAC / PRESSURE TRANSDUCER
Maximum torque: 100N.m

H.1.5 Top Drive Instrumentation

H.1.5.1 Tachometer

Maximum RPM: 270

H.1.5.2 Torque Indicator

Maximum torque: 63,000 ft-lb Continuous
96,000 ft-lb Intermittent

H.1.6 Pump Stroke Counters

Quantity: 3
Stroke indicator and cumulative
stroke counter for each pump: Yes

H.1.7 Tong Torque Indicator

Maximum torque: 14000lbs-ft

H.1.8	Pit Volume Totalizer	N/A
	Make/model:	
	Float in active mud pits:	
	Quantity per tank:	
	Floats in reserve mud pits:	
	Quantity per tank:	
	Floats in mud Storage pits:	
	Quantity per tank:	
	Floats in mud Brine pits:	
	Quantity per tank:	
	Floats in mud Slug pits:	
	Quantity per tank:	
	Loss/Gain indicator:	
	Audio Alarm:	
	Visual Alarm:	
H.1.9	Pit Volume Totalizer	
	Make/model:	VAGA
	High/low alarm:	Yes
	Audio Alarm:	Yes
	Visual Alarm:	Yes
	Sensor location:	Mud pits
H.1.10	Trip Tank Indicator	
	Make/model:	TSC / Integrated with instrument brand VAGA
	Chart recorder:	Yes
	Alarm:	Yes
H.1.11	Automatic Driller (See B.2.1)	Yes
H.1.12	Remote Choke Control Unit (See E.5)	Yes
H.1.13	Crown Clearance Indicator	
	Make/type:	TSC/including in drawworks control system
H.2	DRILLING PARAMETER RECORDER	
	Make/model:	TSC Integration
H.3	INSTRUMENTATION AT CHOKE MANIFOLD	
H.3.1	Choke Manifold Pressure Gauge (Casing Pressure Gauge)	
	Quantity:	2
	Make/type:	WOM/22,000psi
	Pressure range:	22,000psi
H.4	INSTRUMENTATION AT STANDPIPE	
H.4.1	Standpipe Pressure Gauge	
	Quantity:	2
	Make/type:	WOM/10,000psi
	Pressure range:	0~10,000psi
	Visible from driller's position:	Yes
	Visible from choke operating system:	Yes
H.5	DEVIATION EQUIPMENT	

H.5.1 Deviation Recorder

N/A

Quantity:
 Make/type:
 Deviation range:

Quantity:
 Make/type:
 Deviation range:

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

No. of stations: 81
 Make/type: NORTEL/M3902/M3904
 Gai—tronics / Titan
 FHF/ ResistTel
 Gai—tronics/A4 EX
 Explosion proof: 10

H.6.2 Public Address System

Can be combined with H.6.1 above: Yes
 No. of stations: 264
 Make/type: DNH/BK560(T)
 DNH/HS-15EExmN(T)
 DNH/HP-15(T)
 DNH/SAFE-m6(T)
 DNH/DSP-25EEXMN(T)
 Explosion proof: 65

H.6.3 Drill Floor Talkback System

No. of stations: 3
 Location: Driller's Cabin
 Location: Derrick man cabin
 Location: BOP
 Make/type: PHONTECH
 Explosion proof: Yes

H.6.4 Hand Held VHF Radios

Quantity: 12
 Make/model: Motorola/GP338V/GP-338U
 Power: 5W(7.5V)
 Channels: 128
 Location: Portable

H.6.5 Crane Communication System

Quantity: 2 sets/4 sets/2 sets
 Make/type: VHF GM3688/ Speaker/Auto Telephone
 Explosion proof: No/No/No
 Part of rig telephone system (H.6.1): No/No/Yes
 Part of public address system (H.6.2): No/Yes/No

H.7 ENVIRONMENTAL INSTRUMENTATION**H.7.1 Temperature Indicators**

Air temperature (make/model): Observatory BV/Model: OMC-406

Recorder: N/A

Sea water temperature (make/model): N/A

Recorder: N/A

H.7.2 Barometric Pressure Indicator

Make/model: Observatory BV/Model: OMC-506
 Recorder: N/A

H.7.3 Humidity Sensing Indicator

Make/model: Observatory BV/Model: OMC-406
 Recorder: N/A

H.7.4 Wind Speed/Direction Meter

Make/model: Observatory BV/Model: OMC-160
 Recorder: N/A

H.7.5 Wave Profile Recorder

N/A

Make/model:
 Recorder:

H.7.6 Current Indicator

Make/model: FSI/2D ACM
 Located at: Below Helideck
 Recorder:

H.7.7 Weather Facsimile

Make/model: FURUNO/FAX-410
 Located at: Jacking control Room
 Recorder: N/A

H.8 NAVIGATION INSTRUMENTATION

H.8.1 Gyro Compass

Make/model: ANSCHUTZ/STD-22
 Located at: Jacking Control Room

H.8.2 Depth Sounder

N/A

Make/model:
 Located at:
 Recorder:

H.8.3 Radar (IN/Applicable)

N/A

Quantity:
 Make/model:
 Located at:
 Bandwidth:

H.9 EXTERNAL COMMUNICATIONS EQUIPMENT

H.9.1 SSB Transceiver

GMDSS System

Location(s): Radio Room, Jacking Control Room
 Quantity: 2

Make/model:	FURUNO/FS-2575
RF Output Power:	FS-1575:150W FS-2575:250W
POWER:	24VDC
Frequency ranges (low/high):	Transmit:1.6/27.5MHz Receiver:0.1/30MHz
(Synthesized crystal):	
Facsimile capable (see also H.9.9):	NO
Telex capable (see also H.9.10):	1
H.9.2 EPIRBs	
Quantity:	1
Make/model:	McMurdo/E5
Location(s):	Roof of Jacking Control room
H.9.3 Marine VHF Radio	
Quantity:	3
Make/model:	FURUNO/FM-8900S/FM-8900D
RF Output Power:	25 W
Power:	FM-8900S: 24 VDC, 0.6 A (Standby), 1.6 A
(RX),	4.7 A max. (TX)
	FM-8900D: 24 VDC, 0.6 A (Standby), 1.6 A
	(RX),
	7.2 A max. (TX)
Channels:	All VHF channels according to ITU-R Radio Regulations Appendix S18, All channels in FCC Part 80, Max 20 Private channels where permitted by Administrations (preset by the service agent), 10 weather channels (USA and CaN/Ada, receive only)
	Jacking Control room/Radio Room/Tool
Location:	
Pusher	
H.9.4 Aircraft Radio Beacon Transmitter	
Quantity:	1
Make/model:	SAC/SE-125
Power:	5-125W
H.9.5 AeroN/Autical VHF Transceiver	
Quantity:	1
Make/model:	ICOM/IC-A110
Power:	9W(13.75 V DC or 27.5 V DC)
Frequency range (low/high):	118.000–136.975 MHz
(Synthesized/crystal):	
Location(s):	Jacking Control Room
Quantity:	2
Make/model:	ICOM/IC-A24
Power:	7.4/7.2V DC (Battery pack) 11.0V DC (ExterN/AI DC Jack)
Frequency range (low/high):	Tx/Rx 118.000–136.975MHz Rx 108.000–117.975MHz* Weather 161.650–163.275MHz
(Synthesized/crystal):	
Location(s):	Portable

H.9.6 Watch Receiver

Quantity: 1
Make/model: SAC/MR-5
Frequency: 190~245,245~315,315~415,
415~535,535~650kHz

H.9.7 Mobile Earth Station Inmarsat-C

Quantity: 2
Make/model: FURUNO/FELCOM 18
Type: Inmarsat-C
Facsimile capable (see also H.9.9): NO
Telex capable (see also H.9.10): 1
Location(s): Radio Room/Jacking Control Room

H.9.8 Cellular

Number of phone lines: N/A

H.9.9 Facsimile

Make/model: N/A
Connected to:

H.9.10 Telex

Make/model: N/A
Connected to:

H.9.11 Scrambler

Make/model: N/A
Connected to:

H.9.12 Other Communication Systems

● MF/HF DSC/Watch Receiver

Quantity: 2
Make/model: FURUNO/ 04S4176

● N/AVTEX RECEIVER

Quantity: 1
Make/model: FURUNO/NX-700

● Portable VHF Transceiver

Quantity: 4
Make/model: McMurdo/R2

● SART

Quantity: 4
Make/model: McMurdo/S4

● Satellite Communication System

Quantity: 1
TYPE: Antenna
Make/model: INTELLIAN/ V110

Quantity: 1
TYPE: Antenna
Make/model: INTELLIAN /T130

● MARINE GPS N/AVIGATOR

Quantity: 1
Make/model: FURUNO/GP-150

● **RADIO CONSOLE**

Quantity:

1

Make/model:

● **Mobile Earth Station Inmarsat-F**

Make/model:

FURUNO/FLEETBROADBAND

Type:

FELCOM500

Facsimile capable (see also H.9.9):

1

Telex capable (see also H.9.10):

NO

● **NBDP TERMINAL**

Quantity:

N/A

Make/model:

N/A

● **POWER SUPPLY UNIT**

Quantity:

2

TYPE:

Battery Charger

Make/model:

BC-6158

SECTION I - PRODUCTION TEST EQUIPMENT

I.1	BURNERS	N/A
The Burner will be provided by rig operator.		
I.2	BURNER BOOMS	N/A
The burner boom will be provided by rig operator.		
I.3	PIPING ON BURNER BOOMS	N/A
The burner boom will be provided by rig operator.		
I.3.1	Oil Line	
ID:		
Working pressure:		
Connection type at burner end:		
H2S:		
Pressure gauge connection at barge end:		
I.3.2	Gas Line	
ID:		
Working pressure:		
Extended beyond burner by:		
Connection type at burner end:		
H2S:		
Pressure gauge connection at barge end:		
I.3.3	Water Line	
ID:		
Working pressure:		
Connection type at burner end:		
Pressure gauge connection at barge end:		
I.3.4	Air Line	
ID:		
Working pressure:		
Connection type at burner end:		
Pressure gauge connection at barge end:		
I.3.5	Pilot Gas line	
ID:		
Working pressure:		
Connection type at burner end:		
Pressure gauge connection at rig end:		
I.4	SPRINKLER SYSTEM	N/A
System in place:		
Pump source:		
I.5	FIXED PIPING FOR WELL TESTING	
I.5.1	Drill Floor to Separator Area	
Type (threaded/welded/both):		welded
Quantity:		1 pcs
Size ID:		3"
Working pressure:		10000psi
Connection type on drill floor:		Fig.1502
Connection type at separator:		Fig.1502

Number of valves/lines: none
H2S: yes

I.5.2 Separator Area to Each Burner Boom

Service (oil/gas): HP gas
Type (threaded, welded/both): welded
Quantity: 1 pcs
Size ID: 4" Nominal Diameter
Working pressure: 1500psi
Connection at separator: Fig.602
Connection at boom: Fig.602
Number of valves/lines: 1 pcs for each side
Size of valves: 4" Nominal Diameter
H2S: yes
Location: Valves installed near separator area for switching gas to either burner:

Service (oil/gas): LP gas
Type (threaded, welded/both): welded
Quantity: 1 pcs
Size ID: 4" Nominal Diameter
Working pressure: 300psi
Connection at separator: Fig.602
Connection at boom: Fig.602
Number of valves/lines: 1 pcs for each side
Size of valves: 4" Nominal Diameter
H2S: yes
Location: Valves installed near separator area for switching gas to either burner:

Service (oil/gas): OIL
Type (threaded, welded/both): welded
Quantity: 1 pcs
Size ID: 3" Nominal Diameter
Working pressure: 1500psi
Connection at separator: Fig.602
Connection at boom: Fig.602
Number of valves/lines: 1 pcs for each side
Size of valves: 3" Nominal Diameter
H2S: yes
Location: Valves installed near separator area for switching gas to either burner:

I.5.3 Water Lines To Burner Booms

Type (threaded/welded/both): welded
Quantity: 1 high pressure to each side
Size ID: 4" Nominal Diameter
Working pressure: 1000psi
Number of valves required: 1 pcs for each side
Size of valves: N4" Nominal Diameter
Booster pump source: From HP Mud Pump
Rated line capacity at 1000 psi: -

I.5.4 Rig Air System to Burner Booms

Type (threaded/welded/both): welded
Quantity: 1 pcs for each side
Size ID: 3" Nominal Diameter
Working pressure: 130psi
Non-return valves fitted: yes
Air source: rig air ring line

I.5.5 Oil Storage Tank To Offload N/A

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

I.5.6 Separator to Vent Stack Of Rig N/A

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

I.6 AUXILIARY POWER AVAILABILITY N/A

I.6.1 For Field Laboratory

Quantity:
Volts:
Frequency:
Breaker:

I.6.2 For Crude Transfer Pump

Quantity:
Volts:
Frequency:
Breaker:

I.6.3 For Electric Heaters

Quantity:
Volts:
Frequency:
Breaker:

SECTION J - WORKOVER TOOLS

N/A

SECTION K – ACCOMMODATION

K.1 OFFICES

K.1.1 Company Representative's Office

Quantity:	1
Number of combination office/staterooms in above:	
Complete with desk, filing cabinet(s) and other necessary furniture:	1
Quantity with unrestricted view to drill floor:	1

K.1.2 Tool Pusher Office

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

K.1.3 Control Room

Quantity:	1
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K.1.4 Radio Room

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

K.1.5 Helicopter Waiting Room

Quantity:	1
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K.1.6 Hospital Room

Number of beds/bunks:	2
Dangerous drugs locker:	1

K.2 LIVING QUARTERS

K.2.1 Accommodations

Total beds:	110
No. of beds per room type (1,2,4,etc.):	6,8,22
Number of rooms:	36
Toilets (private/shared/communal):	6,8,5
Showers (private/shared/communal):	6,8,3

K.2.2 Galley

Quantity:	1
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K.2.3 Mess Seating Capacity

Main mess:	50
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K.2.4 Conference Rooms

Quantity:	1
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K.2.5 Recreation Rooms

Quantity:	2
Recreation facilities:	
TV:	1
VCR:	1

K.2.6 Other Rooms

Change Rooms:	1
Gym	1
Storage	8
Reading room	1
Laundry	1
Training room	1

K.2.7 Mechanical Workshop

Lathe Machine 1
 Maker: Yangzhou Lichuang

Drilling Press 1
 Maker: Anhui Huangshan

Grinder machine 1
 Maker: Jiangsu Jinding

K.2.8 Electrical Workshop

One Electrical test panel shall be mounted in the electric workshop to provide the following power supplies for testing purposes:

- 480 volt, 3 phase, 60 cycle A.C. - 20 amp
- 220 volt, 1 phase 60 cycle A.C. - 20 amp
- 127 volt, 1 phase, 60 cycle A.C. - 10 amp
- 24VDC -15amp
- Adjustable Auto Transformer with an input voltage of 220 volt, output 0-250 volt

SECTION L - SAFETY EQUIPMENT

To be provided by YCRO as per IMO, ABS, Flag States requirements

L.1 GENERAL SAFETY EQUIPMENT

L.1.1 General Personnel Protective Gear

Safety glasses:

(contractor/everyone/Not supplied):

Safety hats (contractor/everyone/Not supplied):

Safety boots (contractor/everyone/Not supplied):

Safety clothing:

(contractor/everyone/Not supplied):

Ear protection (contractor/everyone/Not supplied):

Rubber gloves

(contractor/everyone/Not supplied):

Not supplied

(contractor/everyone/Not supplied):

Rubber gloves - elbow length:

(contractor/everyone/Not supplied):

Full-face visors:

(contractors/everyone/Not supplied):

Eye shields (for grinders):

(contractor/everyone/Not supplied):

Dust masks (contractor/everyone/Not supplied):

Explosion proof hand torches:

(contractor/everyone/Not supplied):

Safety belts c/w lines:

(contractor/everyone/Not supplied):

L.1.2 Decontamination Stations

L.1.2.1 Eye Wash Stations:

Quantity - fixed: (with shower)

4

Make/model:

Dongfang Marine Fitting Co. Ltd

Location(s):

Drill floor, Mud pit room,
Sack storage room upper, solid control
platform,

Quantity - fixed:

Make/model:

Location(s):

L.1.2.2. Safety Showers

Quantity:

4

Location(s):

together with fixed eye wash stations

L.1.3 Derrick Safety Equipment

Derrick escape line

1

Geronimo line:

1

Derrick safety belts:

2

L.1.4 Derrick Climbing Assistant

N/A

Maker/Type:

L.1.5 Fresh Air Blowers(Bug Blowers)

Quantity :

2

Located at : Drilling floor, 2

L.2 GAS/FIRE/SMOKE DETECTION

L.2.1 H₂S Monitoring System

Make/type: Draeger/Polytron TX

Sampling points at

Diverter:	1
Drill floor:	7
Shale shaker:	1
Mud tanks:	3
Ventilation system into living quarters:	10
Other:	1

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:	SWBD Room
Tied to general alarm:	Yes
Central control panel:	Jacking Control Room
Located at:	
Local alarm (audible/visual/both):	Both

L.2.2 Combustible Gas Monitoring System

Make/type: Autronica/HC-300PL

Sampling points at

Diverter:	1
Drill floor:	7
Shale shaker:	1
Mud tanks:	3
Ventilation system into living quarters:	10
Other:	1

Alarms at:

Driller's 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:	SWBD Room
Tied to general alarm:	Yes
Central control panel:	Jacking Control Room
Located at:	
Local alarm (audible/visual/both):	Both

L.2.3 H₂S Detectors (Portable)

Quantity: 2(Multi-gas detector that can detect H₂S,CO,O₂,Exp Flammable Gas)

Make/type: Honeywell

Stain tubes for H₂S: measuring range:

from 1 to 20 percent:	
From 100 to 600 percent:	

L.2.4 Explosimeters (Portable)

Quantity: 2(Refer to L.2.3)

Make/type: Honeywell

L.2.5 CO₂ Gas Detectors (Portable)

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

L.2.6 O₂ Meter (Portable)

Quantity:	2(Refer to L.2.3)
Make/type:	Honeywell

L.2.7 Fire/Smoke Detectors

Make/type:	Tyco
Flame detectors:	8
Make/type:	Autronica
Smoke detectors:	152
Make/type:	Autronica
Heat detectors:	12
Central control panel:	
Location:	Jacking Control Room
Alarms:	Yes
Pull boxes:	Yes

L.3 FIRE FIGHTING EQUIPMENT

L.3.1 Fire Pumps

Quantity:	1 (main fire pump)
Make/model:	Azcue, Spain
Type:	VM-EP80/20
Output (each):	160m ³ /hr @ 70m
Location:	Pump room
Rated Power:	52KW

Quantity:	1 (for Emergency)
Make/model:	Azcue, Spain
Type:	VM-EP80/20
Output (each):	160m ³ /hr @ 70m
Location:	HP Pump Room
Rated Power:	52kw

All off-take points supplied by all pumps:

L.3.2 Hydrants and Hoses

Hydrants positioned such that any point may be reached by a single hose length from two separate hydrants:

Quantity of hydrants:	13(accommodation)
Hose connections/hydrant:	
Hose max. diameter:	38-40mm
Length:	20m

Hydrants positioned such that any point may be reached by a single hose length from two separate hydrants:

Quantity of hydrants:	9 (Main Deck)
Hose connections/hydrant:	
Hose max. diameter:	64-66mm
Length:	15m

Hydrants positioned such that any point may be reached by a single hose length from two separate hydrants:

Quantity of hydrants:	9 (Below Main Deck)
Hose connections/hydrant:	
Hose max. diameter:	65
Length:	15m

Hydrants positioned such that any point may be reached by a single hose length from two separate hydrants:

Quantity of hydrants:	6 (Cantilever and Drill floor)
Hose connections/hydrant:	
Hose max. diameter:	50
Length:	15m

L.3.3 Portable Fire Extinguishers

Quantity	
Type 1-CO ₂ :	
5kg	23

Type 2- Dry powder:	
25kg	2
6kg	96

Type 3-Foam:	
45L	3
20L	2

L.3.4 Fire Blankets

Quantity:	1
Location(s):	galley

L.3.5 Fixed Foam System

N/A

Make/type:	KIDDER
Quantity of foam concentrate stored:	600L
Foam type:	AFFF 3%
Application rate:	4.1L/Min/M2
Foam Nozzles:	K40
Located at:	
Located at:	Mud Process Area
Located at:	
Automatically injected into fixed fire water system:	NA

L.3.6 Helideck Foam System

Make/type:	KIDDE CHINA LIMITED
Quantity of monitors:	2
Quantity of foam concentrated stored:	1
Foam type:	AFFF
Application rate:	3% of water flow rate

L.3.7 Fixed Fire Extinguishing System

Protected spaces:	
Engine room, type (Halon/CO ₂ /other):	CO ₂
Remote manual release located at:	Outside of ER & CO ₂ ROOM
Paint locker, type (Halon/CO ₂ /other):	CO ₂
Remote manual release located at:	Outside of Locker & CO ₂ ROOM
Emergency generator, type (Halon/CO ₂ /other):	CO ₂
Remote manual release located at :	Outside of Emergency generator room & CO ₂
Room	

VFD & ECR room, type (Halon/CO2/other)	CO2
Remote manual release located at:	Outside room and co2 room
Other - (specify location & type):	galley areas(wet chemical sys only)
Remote manual release located at:	
Alarms (audible, visual or both):	both
Automatic shutdown of ventilation fans in protected spaces:	Yes

L.3.8 Manual Water Deluge System

Protected spaced:	Drill floor K&C manifold area
Water supplied from fire main line:	Yes

L.3.9 Water Sprinkler System in Accommodation

Automatic activation:	Yes
Working pressure:	9 Bar
Tank capacity:	5000L
Salt water backup:	Fresh water Standby: sea water
Type (wet pipe/dry pipe):	wet pipe

L.4 BREATHING APPARATUS

L.4.1 Firemen's outfit

Quantity:	4
Make:	JIANGSU HUAYAN MARIINE EQUIPMENT
CO.LTD	
Cylinder duration:	30min
Located at:	04 deck

L.4.2 EEBD

Quantity:	6
Make:	JIANGSU HUAYAN MARIINE EQUIPMENT
CO.LTD	
Cylinder duration:	15min
Located at:	lower machinery deck-2pcs.
Located at:	01 deck-1pcs
Located at:	02 deck-1pcs
Located at:	03 deck-
2pcs	

L.4.3 Breathing Air Recharge Compressor

Quantity:	N/A
Make/type:	N/A
Charging rate:	N/A Working
pressure:	N/A Located
at:	N/A

L.4.4 Air Purity Test Equipment N/A

Quantity:
Make/type:

L.5 EMERGENCY FIRST AID EQUIPMENT

L.5.1 First Aid Kits

Quantity:	4
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L.5.2 Burn Kits

Quantity: N/A

L.5.3 Stretchers

Quantity: 1
Type:
Located at: Main deck

Quantity: 2
Type:
Located at: 02 deck

Quantity: 1
Type:
Located at: 04 deck

L.6 HELIDECK RESCUE EQUIPMENT

Adjustable Wrench	1Pcs
Rescue axe, large(non wedge or aircraft type)	1Pcs
Cutters, bolt.	1Pcs
Crowbar, large	1Pcs
Hook, grab or salving	1Pcs
Hacksaw heavy duty and six spare blades	1Pcs
Blanket, fire resistant	1Pcs
Ladder(two-piece)	1Pcs
Life line(5 cm circumference x 15 m in length) plus rescue harness	1Pcs
Pliers, side cutting(tin snips)	1Pcs
Set of assorted screwdrivers	1Pcs
Harness knife c/w sheath	4Pcs
Gloves, fire resistant	4Pcs
Self-contained breathing apparatus	4Pcs
First –aid kit DIN 13157-C	1Pcs
Fire training manual without maintenance booklet	

L.7 EMERGENCY WARNING ALARMS

Approved system to give warning of different emergencies: Abandon, General Alarm, H2S, Combustible Gas, Fire Alarm
Activated from drill floor: Yes

L.8 SURVIVAL EQUIPMENT

L.8.1 Lifeboats

Make/type: Jianyin wolong F.R.P boat Co., ltd /JY102F
Quantity: 2
Capacity: 110 person/craft
Locations (frwd/port/stbd): port/stbd
Fire protection: Total enclosed
Radio/EPIRB (see section H.9): Yes

L.8.2 Liferrafts

Make/type: VIKING LIFE-SAVING EQUIPMENT
TRADING (SHANGHAI) CO. LTD/25DK
Quantity: 5
Capacity: 25 person/craft

Davit launched: N/A
Locations port/stbd

L.8.3 Rescue Boat

Make/type: Jiangyin wolong/JY45DR
Engine power: 6knots

L.8.4 Personal Floatation Devices N/A

Make/type:
Quantity:

L.8.5 Survival Suits

Make/type: immersion suit
Quantity: 142pcs

Make/type: lifejacket
Quantity: 192pcs

L.8.6 Life Ring Buoys

Make/type:
Quantity total: 10
with lights: 4
with smoke: 2
with lifeline: 4

L.8.7 Work Vests

Quantity: 25

L.8.8 Embarkation ladder

Make/type: 25m
Quantity: 2

SECTION M - POLLUTION PREVENTION EQUIPMENT

M.1 SEWAGE TREATMENT

Make/model: EVAC(shanghai) / MBR 80C
System type: BiologicalFAST D4
Capacity: For 110 person

M.2 GARBAGE COMPACTION

Make/model: N/A
System type:

M.3 GARBAGE DISPOSAL/GRINDER (IN GALLEY)

Make/model: Wesco 526
System type: N/A

M.4 INCINERATOR

Make/model: N/A
System type:

M.5 OILY WATER SEPARATOR

Quantity: 1
Make/model: JOWA, Sweden / 3SEP OWS 5m3/h
System type: Coalescent type

Nominal throughput:
Separation capacity: 5m3/h

M.6 Drill floor drainage

Drainage from Drill floor is collected in 8" drain lines which are rooted to to the cantilever in 6" and onwards to the skimmer tank in 6". The contents of the tank can be pumped in to, portable tank.

SECTION N - ADDITIONAL INFORMATION

N.1 Tow Requirements

Towing bracket MBL.360T	4 Pcs.
Delta plate MBL.320T	1 Pcs.
Towing chock MBL.360T	2 Pcs.
Towing chain MBL.320T	4Pcs.
Towing wire rope MBL.320T	1 Pcs.
Towing wire rope MBL.320T	2 Pcs.
Shackle MBL.320T	5 Pcs.
Recovery shackle SWL.6.5T	1 Pcs.
Recovery steel wire rope SWL.5T	1 Pcs.
Sheave SWL.10T	2 Pcs.
Hanging chain SWL.5T	1 Pcs.