



Rig # MB 104
Drillmec MR8000

A. GENERAL RIG SPECIFICATIONS

A.1 MAST & SUBSTRUCTURE

A.1.1 Mast

Make/type :	Drillmec M 200
Height (m) :	126'
Width of base (ft x ft) :	6.89' x 3.47'
Width of top (ft x ft) :	4.95' x 3.18'
Static hook load (lbs) :	440,000 lbs
Max. hook load with No. of lines strung (lbs) :	440,000 lbs with 10 lines

A.1.2 Racking platform

Make/type :	Drillmec
Racking platform capacity of drill pipe : Size/No.	4 1/2" / 386 Nos.
Racking platform capacity of drill collar : Size/No.	8-1/4" & 6 1/2" / 20 Nos each
Racking platform capacity of drill collar : Size/No.	4 1/4" / 20 Nos.

A.1.3 Substructure

Make/type :	Drillmec, Model ST-17-335, Fast moving type
Height (ft) :	21 ft floor height
Width (ft) :	22ft
Setback capacity (lbs):	250,000
Rotary capacity (lbs):	440,000
Clear height below rotary table beams (ft):	17.5 ft
Substructure footprint (ft x ft) :	22 x 39

A.1.4 Rig floor winches

Make :	Ingersoll Rand
Quantity :	1
Type :	Air Winch
Capacity & S.W.L. :	5 Ton
Wire diameter (inch) :	0.625"
Automatic brakes :	Manual
Automatic spooling :	Yes

A.1.5 Monkey board work winch

Make :	Brevini
Quantity :	1
Type :	Hydraulic Operated
Capacity & S.W.L. (lbs) :	4,000
Wire diameter (inches) :	0.314"
Automatic brakes :	Yes
Automatic spooling :	No.



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A.1.6 Rig floor 'man-riding' winch

Make :	Ingersoll Rand
Quantity :	1
Type :	Hydraulic
Capacity & S.W.L. (Lbs) :	550
Non-rotating wire diameter (inch) :	0.39"
Automatic brakes :	Yes
Automatic spooling :	Yes

A.1.7 Utility winch.

Make :	Ingersoll Rand
Quantity :	1
Type :	Hydraulic
Capacity & S.W.L. (Lbs) :	11,000
Wire diameter (inch) :	0.625"
Automatic brakes :	Yes
Automatic spooling :	Yes

A.2 DRAWWORKS AND ASSOCIATED EQUIPMENT

A.2.1 Drawworks

Make/type :	MR 8000
Drum type :	Single drum
Spinning cathead type :	Hydraulic, 13,200 lbs, stroke 4.6 M
Breakout cathead type :	Hydraulic, 26,400 lbs, stroke 1.3 M
Blocks safety device type/model	Crown-O-matic/ Floor saver
Rated capacity (kW/HP) :	746 / 1000
Input power continuous (kW/HP) :	746 / 1000
Brake type :	Equalized band brakes
Maximum Safe Hookload 10 lines (lbs) :	440,000
Maximum Safe Hookload 8 lines (lbs) :	352,000

A.2.2 Drawworks power

Number of engines :	2
Engine make :	Caterpillar
Engine model : " "	3408
Maximum input power continuous (kW/HP) :	746 / 1000

A.2.3 Auxiliary brake

Make/Type :	Parmac / Hydromatic
Model :	V-80
Torque Rating (lbs/ft) :-	5996 lbs/ft @ 292 RPM braking Capacity.

A.3 HOISTING EQUIPMENT

A.3.1 Crown block

Make/type :	Drillmec
Rated capacity (lbs) :	440,000
No. of sheaves :	6



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A.3.2 Travelling block

Make/type : American Block DH 30 E 250
Rated capacity (lbs) : 500,000
No. of sheaves : 5

A.3.3 Hook

Make/type : American Block DH 30 E 250
Rated capacity (lbs) : 500,000

A.3.4 Swivel

Make/type : IDECO TL-200
API Rated bearing capacity (Ton) : 183 Tons
Comparative dead load (Ton) : 300 Tons

A.3.5 Drilling line

Size (inch)/type : 1.125", 6X19 IWRC, EIPS
Breaking strength (lbs) : 119,000
Length (feet) : 5,000

A.3.6 Anchor dead line

Make/type : Hercules
Load rating (lbs) : 50,000
Weight sensor type : Tension load cell

A.4 ROTARY SYSTEM

A.4.1 Rotary table

Make/type : Soilmecc
Minimum opening (inch) : 27 1/2"
Rated power (HP) : Chain driven by drawworks engines 1000 hp
Maximum continuous torque (lbs/ft) : 17,630
Maximum rotary speed (RPM) : 200
Emergency chain drive : Chain drive only

A.4.2 Solid Split type master bushings

Make/type : Drillmec Model SSD

A.4.3 Kelly bushing

Make/type : Pin Drive Model 27- HDP
Size : 4 1/4" HD
Lock down assembly : Yes

A.4.4 Kelly

1 x 5-1/4" Hex Kelly, 40' long. 6-5/8" API Reg. LH box up x 4-1/2" IF pin down. 3 1/4" ID.
1 x 4-1/4" Hex Kelly, 40' long. 6-5/8" API Reg. LH box up x 3-1/2" IF pin down. 3 1/4" ID.

A.4.4 Top drive

RENTAL Unit
Make & Type : Varco TDS-10S
Rated capacity (Ton) : 250 Ton
Drive : AC induction, force air cooled
Make & Type : Reliance Electric
Rated power (kW/HP) : 350 HP
Rated torque (ft-lbs) : 36,500 ft-lb intermittent / 20,000 continuous



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Maximum rotary speed (RPM) :	182 rpm continuous
Pipe Handler:	PN-59
Torque Capacity:	55,000 lb/ft @ 2000 psi
Drill Pipe Range:	2-7/8" to 5"

B. POWER SUPPLY SYSTEMS

B.1 RIG POWER PLANT

B.1.1 Diesel engine plant

Quantity :	Total 9 Engines; 2 for drawworks, 2 for mud pumps and 3 for other AC requirements, 2 for site accom.
Make :	Caterpillar
Type :	2 X 3408, 2X 3512, 3 X C-15, 2 x GEP 165,

B.1.2 AC- Generator

Quantity :	3
Make :	Caterpillar
Type :	C15
Output volts (Volts) :	415V , 50 hz , 3 PH, 220v 1 ph

B.1.3 Rig service air system

Air Compressors		ATLAS COPCO , Rotary Screw Air Compressor, Stationary, Oil injected, 2 WITH INTEGRATED DRYERS
Quantity :		Model GA22-10 Pack
Make & Model :		Capacity: 114.2 cfm (53.9 l/s) at 10 bar 128 cfm (60.4) at 8.5 bar. Max.
Rated capacity :		
Working pressure	Psi	145
Air Receivers		
Quantity :		2
Make & Type :		Atlas Copco Model LV 511
Rated capacity :		Air Receiver – Atlas Copco Model LV 911
Working pressure	Psi	900 AND 500 LTRS 145

B.2 CAMP POWER PLANT

B.2.1 Diesel engine plant

Quantity :	2
Make :	Caterpillar
Type :	3406-AC POWER
Continuous power (kW/HP) :	292/380

B.2.2 AC- Generator

Quantity :	2
Make :	Caterpillar
Type :	AMODED LC6
Continuous power (kW/HP) :	292 KW /380HP, 2 EA
Output volts (Volts) :	415/ 220V AC.50Hz.3Ph.



C. DRILL STRING / HANDLING TOOLS

C.1 DRILL STRING

C.1.1 Drill Pipe

OD/ID body	inch	5"	3 1/2"
Total length	ft	10,000	5,000
Grade/Weight (kg/m, lbs/ft)/Range		G 105	G 105
Type of connection		4 1/2" IF	
Tool joint OD	inch	6-3/8	5"
Tool joint ID	inch	3-1/4	2
Type of hard banding		Arneo 300 XT	

C.1.2 Drill Collars

OD/ID body	inch	8 1/4" / 2 13/16"
Quantity :		20
Type of connection		6 5/8" Reg
OD/ID body	inch	6 1/4" / 2 13/16"
Quantity :		20
Type of connection		4" IF
OD/ID body	inch	4 3/4" / 2"
Quantity :		20
Type of connection		NC 35

C.1.3 Heavy Weight Drill Pipe

OD/ID body	inch	5" &	3 1/2"
Total length	joints	35	25
Grade/Weight	lbs/ft	49.3 ppf	25.3 ppf
Type of connection		NC50	NC38

C.2 HANDLING TOOLS

C.2.1 Elevators

Drill Pipe	3-1/2, 5", Model: MGG(DDZ) Center latch type
Drill Collar	8-1/4, 6-1/4, 4-3/4
Tubing	2-3/8, 2-7/8, 3-1/2, 4-1/2. Type of elevator : slip type

C.2.2 Slips

Drill Pipe	3-1/2, - 5",
Drill Collar	4-3/4, 6-1/2, 8-1/2
Tubing	2-3/8, 2-7/8, 3-1/2, 4-1/2,

C.3 FISHING EQUIPMENT

All Fishing equipment to connect with Contractors tubulars and down hole tools are supplied.



D. WELL CONTROL EQUIPMENT

D.1 BOP Stack

D.1.1 13-5/8" 5,000 psi WP BOP

a) Bag type preventer

Quantity :	1
Make :	Hydrill or equiv.
Type :	Annular
Size (inch) :	13-5/8"
WP (PSI) :	5000 psi
Connection top/bottom :	Flanged

b.1) Ram type preventer

Quantity :	1
Make :	Shaffer or equiv.
Type :	LS
Single/double :	Single
Size (inch) :	13-5/8"
WP (PSI) :	5000 psi
Side outlet ID (inch) :	2"
Connection top/bottom :	Studded
Lock mechanism :	Yes

b.2) Ram type preventer

Quantity :	1
Make :	Shaffer or equiv.
Type :	LWS
Single/double :	Double
Size (inch) :	13 5/8"
WP (PSI) :	5000 psi
Side outlet ID (inch) :	2"
Connection top/bottom :	Studded
Lock mechanism :	Yes

c) Rums

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

D.1.2 Diverter

Quantity:	1
Make:	Shaffer or equiv.
Size:	21-1/4"
Rating:	2,000 psi
Outlets:	10" 2M
Vent line:	30 metre; 6"



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D.1.3 Mud Cross

Qty:	1
Size:	13-5/8" 5M X 13-5/8" 5M
Height:	24"
Outlets:	2 x 4" 5M with DSA 3-1/8" 5M & DSA 2-1/16" 5M outlets.
Qty:	1
Size:	21-1/4" 2M x 21-1/4" 2M
Height:	24"
Outlets:	Two(2) x 10" outlets; 2M
Vent line:	30m; 6" ID

D.2 BOP CONTROL SYSTEM

D.2.1 Accumulator unit

Make :	Sara
Mdel/type :	80
Installation site :	Driller Side, 10 meter from centre of Well
System fluid capacity	Gallons 350
No. of bottles installed	Gallons 24 x 11 gallons each
Total bottles capacity	Gallons 263.9
Bottle working pressure	psi 3000
Control manifold model :	
Low pressure/low reservoir level alarms	y/n Yes

D.2.2 Triplex pumps

Quantity :	1
Make :	Sara
Model :	Sara UET 20 HT 400
Each driven by motor of	kW 25 hp
Flow rate of pump	GPM 11.35
At max. operating pressure	psi 3000

D.2.3 Air pumps

Quantity :	2
Make :	Sara
Model :	50:1 ratio
Flow rate of each pump	GPM 9.9
At max. operating pressure	psi 3000

D.2.4 Driller's control panel

Make :	Sara
Model :	AE GRB07-FC
Serial No. :	0698-4080(DR)
Low accumulator system pressure warning	Yes
Low reservoir level warning	Yes
Low rig air pressure warning	Yes
Pressure regulator for bag	Yes
Control for by-pass valve	Yes
Quantity of pressure gauges :	3

D.2.5 Remote control panel



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Make : SARA
 Model : AE GARC6
 Location site : Near contractor site rep. office

D.2.6. Kelly Cocks

UPPER 2 only Hydril 6-5/8" Reg LH Upper Kelly Cock 10000 psi WP
 LOWER 1 only Hydril Kelly Guard 6 1/4" OD - 4"1/2" IF P x B 10000 psi
 2 only Hydril Kelly Guard 4 3/4" OD 3 1/2" IF Pin x Box 10 000 psi.

D.3 CHOKE MANIFOLD & TESTING EQUIPMENT

D.3.1 Choke manifold

Make : Cameron
 Size inch 3 1/8"
 Working Pressure psi 5000
 H₂S service y/n Yes
 Quantity of valves : 11
 Make/model :
 Size inch 3 1/8"
 Quantity of adjustable chokes : 1
 Make/type :
 Quantity of power chokes : 1
 Make/type :
 Power choke remote control panel y/n Yes
 Make/type :
 Glycol injection pump y/n No
 Make/type :

D.3.3 Test stumps for BOP testing

Location : Substructure
 Complete with test tools y/n Yes

D.3.4 BOP test sub

Type : UES
 Connection : 3 1/2"IF

F. CASING

F.1 CASING EQUIPMENT

F.1.1 Side Door Elevators

13 3/8" SLX 90° Sholder
 9 5/8" SLX 90° Sholder
 7" SLX 90° Sholder

F.1.2 Single Joint Elevators

13 3/8" SJ Single Joint centre latch
 9 5/8" SJ Single Joint centre latch
 7" SJ Single Joint centre latch
 4.1/2" SJ Single Joint centre latch
 3.1/2" Model: SJ Single Joint centre latch



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F.1.3 Slip Type Elevator/Spider

4 1/2" Model: YC

3 1/2" Model: YT

F.1.4 Power Casing/Tubing Tong

Model: HT55 Type B with lag jaws for 2-3/8" to 13 3/8"

F.1.5 Cup Tester

Make: Cameron or equiv.

Model: Type F

F.1.6 IBOP

Manufacturer: Hydrill

Type: Plunger type I-BOP c/w removable setting tool

Rated: 10,000 psi WP

Size: 1 x 3 1/2", 1 x 4 1/2" IF Conns

F.1.7 DRILL PIPE SAFETY VALVES :

Manufacturer: Hydrill

Rated WP: 10,000 psi WP

Size: 3 1/2" IF, 4 1/2" IF

Qty: AS ABOVE, 2 x NC 38, 2 x NC 50

G. INSTRUMENTATION

G.1 Rig Communication System

G.1.1 Public address system

Make : Gaitronics/Model 733001

Type : Electric

G.1.2 Intercom system

Make : Gaitronics

Type : 110v

Explosion proof y/n Yes



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H. ACCOMMODATION / OFFICES / WORKSHOPS

H.1. Rig Camp

One (1) Company Man Office
One (1) Company Man / Rig Manager Sleeper
One (1) 2 man 40 ft VIP Sleeper units
One (1) Dining room / Toilet
One (1) Rig Managers Office / HSE & Logistics Office
One (1) Mechanic / Electrician Office
One (1) Medic Shack
One (1) Mechanics and Electricians Sleepers
One (1) Set Camp Generators
Water Tank, Diesel Tank
One (1) Water treatment
One (1) Mud engineer office / sleepers

H.2 Main Camp

Four (4) 16-man sleeper units
One (1) Kitchen and Food prep area
One (1) Staff Diner
One (1) Non-staff Diner
One (1) Frefzer, Chiller, dry foods storage
Two (2) 8-man sleepers
Two (2) 2-man VIP Sleepers
One Camp Boss Sleeper / Office
One (1) Non-staff Rec Room
One (1) Ablutions unit
Two (2) Water Tanks
One (1) Set Camp Generators w/ Fuel Tank

I. TRANSPORT

(RENTAL) Three (3) Light vehicles

(RENTAL) One (1) All-terrain Crane; 35 Ton

One (1) Forklift; Manitou MVT 675 or equiv.

(RENTAL) Heavy transport vehicles, AWD; as necessary to transport Contractors Rig and associated equipment to Rig Site

E. MUD SYSTEM

E.1 HIGH PRESSURE MUD SYSTEM

E.1.1 Mud pumps

a) Mud pump No. 1

Make :		Drillmec
Model :		9 T 1000
Mud pump driven by motors:	No. Type	Caterpillar 3512 DITA Engines
Continuous power rating of each motor	kW (HP)	1260 HP
Fluid end	type	Drillmec
Cylinders/valves cover :		Drillmec

Equipped with :-

Pump stroke counter	type	Drillmec
Liner sizes available	inch	4" to 7"
Supercharging pump	type	Centrifugal
Independently driven by motor	kW (HP)	55/75
Discharge/suction line dia (ID x ID)	inch	4" x 8"
Working flowrate	GPM	Max delivery 585 GPM

b) Mud pump No. 2

Make :		Drillmec
Model :		9 T 1000
Mud pump driven by motors:	No. Type	Caterpillar 3512 Dita Engines
Continuous power rating of each motor	kW (HP)	1260HP
Fluid end	type	Drillmec
Cylinders/valves cover :		Drillmec

Equipped with :-

Pump stroke counter	type	Drillmec
Liner sizes available	inch	4" to 7"
Supercharging pump	type	Centrifugal
Independently driven by motor	kW (HP) :	55/75
Discharge/suction line dia (ID x ID)	inch	4" x 8"
Working flowrate	GPM	Max delivery 585

E.2 LOW PRESSURE MUD SYSTEM – TANKS

E.2.1 MUD TANK SYSTEM

a) Active mud tanks

Quantity :		12
Total capacity	Bbl	937
Dimensions	m	3m dia. X 2.1m high (circular tanks)
Description/Capacity No. 1	Bbl	10 tanks
Description/Capacity No. 2	Bbl	1 x 8 m3 sandtrap
Description/Capacity No. 3	Bbl	1x 37.7 Trip- and 6.28 Striptank
Capacity degasser tank	Bbl	84.9



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b) Reserve tanks

Quantity :		8
Total capacity	Bbl	679.3
Dimensions	m	3m dia. X 2.1m high (circular tanks)
Description/Capacity No. 1	Bbl	8 x 84.9

c) Water tanks (Brine tanks)

Quantity :		2
Total capacity	Bbl	943.47
Dimensions	m	13.2m x 2.9m x 2.6m
Description/Capacity No. 1	Bbl	471.74
Description/Capacity No. 2	Bbl	471.74

E.2.2 Settling tank

Capacity	Bbl	84.9
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E.2.3 Pill tanks.

Quantity :		1
Description/Capacity No. 1	Bbl	84.9

E.2.4 Trip tank

Capacity	Bbl	37.7
Level indicator make/type :		Electronic
Electric pump make :		Double Life 2"X 3"
Model/type :		Model 250
Motor output	kW (HP)	15 HP

E.2.5 Stripping tank

Capacity	6.2 bbls
Equalising facility with triptank	Yes
Transfer pump	Yes

E.2.6 Mud agitators

Quantity :		17
Make :		Double Life
Model :		DL 10
Driven by motor of	kW (HP)	7.5kw

E.2.7 Mixing pumps

Quantity :		2
Make/Model :		Double Life 250

E.2.8 Mud mixing hopper

Quantity/location :		2 / Pill / Slug Tank
Make/Model :		Double Life 250
Feed pump make :		Double Life
Type/size centrifugal pump :		Model 250 / 6"x 8"
Driven by electric motor of	rpm x kW (HP)	1450 x 60

E.2.9 Chemical mixing tank

Quantity :		1
Description/Capacity	Bbl	1
Chemical mixer type :		Blade



E.3 LOW PRESSURE MUD SYSTEM – PROCESS EQUIPMENT

E.3.1 Shale shaker

Quantity :	2
Make :	Brandt
Type :	King Cobra
Size screens :	80,125,150,180, 200 ,230
Driven by No. of electric motors :	2
Combined Max. flowrate	GPM 1000

E.3.2 Desilter/Mud cleaner

Make :		Double Life	
		Desilter	Mudcleaner
Quantity of cones :		24	3
Cone size :	inch	4"	10
Type/size centrifugal pump :		6 x 8	6X8
Driven by electric motor of	rpm x kW (HP)	1450 x 55 (75)	1450 X 55 (75)
Max. flowrate	GPM	1100	1100
Min. operating pressure with unweighted muds	kPa	180	180

E.3.3 Mud/gas separator (poor boy)

Make/type :		NSF
Minimum diameter ID	inch	48"
Gas discharge line OD	inch	8"
Gas discharge line running to :		Waste pit

E.3.4 Vacuum Degasser

Make :		Brandt
Type :		Vacuum
Type/size centrifugal pump :		Halco 6 x 5
Driven by electric motor of	kW (HP)	5 HP
Discharge line running to :		Desander Tank
Vacuum pump make :		Double Life
Type :		DG 10 / 12

E.3.5 Cellar pump

Quantity :	3
Make (e.g. Flygt) :	Flygt
Type :	Electrical 20 HP
Capacity	GPM 2100