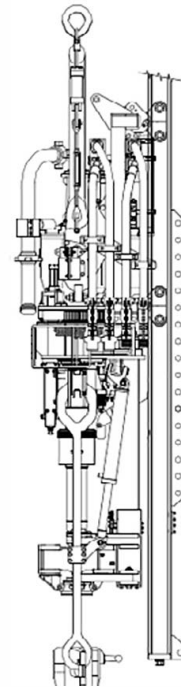


**1,200hp drilling rig** Equipped with a Bowen TD350 Top Drive system with HPU



**NATIONAL OILWELL VARCO**

**TD350P  
TOP DRIVE**



**Key Data**

Rig Type	Mechanical
Nominal Drilling Cap. With 5"-19.5#/ft D.P.	12,000 ft (3650m)
With 3.1/2"-15.5#/ft D.P.	15,000 ft (4600m)
Workover Cap. With 2.7/8"-10.4#/ft D.P.	12,500 ft
Well Servicing with 2.7/8"-8.7#/ft EUE Tubing	27,000 ft
Drawworks Nominal Power	1200 HP
Max. Static Hook Load (with 10 lines)	570,000 LBS

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## Main Components

### 1) Mast

MAST MAKE-TYPE	3	3
BUILT AS PER API STANDARD	NO	API 4-F
CLEAR HEIGHT OF MAST.	M	41,4
USE SINGLE-DOUBLE TRIPLE LENGHT.	:	TRIPLE
MAXIMUM API RATED STATIC HOOK LOAD WITH FULL SETBACK LOAD, WIND LOAD OF 115 KM/H AND MAX. NUMBER OF LINE STRUNG.	MTON	260
MAX.LINES STRUNG ON TRAVELLING BLOCK	NO	10
UPPER PART OF MAST PAINTED FOR DAY SIGNALLING TO AIR- NAVIGATION	YES/NO	YES
RED LIGHTS AS PER REGULATION ON TOP OF MAST	YES/NO	YES

### 2) Racking Platform

RACKING PLATFORM MAKE-TYPE	:	
RACKING PLATFORM CAPACITY OF 5" D.P	M	4000
RACKING PLATFORM CAPACITY OF 6.1/2"D.C	M	300
RACKING PLATFORM CAPACITY X D.P RANGE.	IN-IN	5" AND 3"1/2
RACKING PLATFORM CAPACITY X D.C RANGE.	IN-IN	8" – 6"1/2 – 4"3/4
HEIGHT FROM RIG FLOOR	M	26
DERRICKMAN WIND BREAKS	YES/NO	YES
WIND BREAKS TYPE AND HEIGHT	M	YES
DERRICKMAN ESCAPE DEVICE	YES/NO	YES
CASING STABBING BOARD MAKE-TYPE	:	
STABBING BOARD ADJUSTABLE FROM TO	M-M	6 : 12

## Main Components

### 3) Substructure

SUBSTRUCTURE MAKE-TYPE	:	
SUBSTRUCTURE BUILT AS PER API STANDARD	NO	API 4-F
API RATED SETBACK LOAD CAPACITY	MTON	203
API RATED ROTARY LOAD CAPACITY	MTON	272
API RATED SIMULTANEOUSLY LOAD CAPACITY OF SETBACK AND ROTARY	MTON	475

### 4) Rig Floor

RIG FLOOR DIMENSIONS	M-M	6,2 X 6,5
RIG FLOOR HEIGHT FROM GROUND LEVEL	M	6,7
CLEAR HEIGHT BETWEEN ROTARY BEAMS AND GROUND LEVEL	M	5,4
DRILLER'S DOG HOSE		
DIMENSIONS L-W-H	MT 6 X 2,4 X	2,4

### 5) Crown Block

MAKE AND TYPE	:	
BUILT AS PER ISO	NO	API 8-A
RATED LOAD CAPACITY	MTON	285
SHEAVES NUMBER AND OUTSIDE DIAMETER	NO-IN	1 X 50; 5 X 42
SHEAVES FOR O.D. WIRE LINE	IN	1"1/4

### 6) Travelling Block

MAKE AND TYPE	:	GARDNER DENVER
BUILT AS PER ISO	NO	API 8-A
RATED LOAD CAPACITY	MTON	272
SHEAVES NUMBER AND OUTSIDE DIAMETER	NO-IN	5 X 42
SHEAVES FOR O.D. WIRE LINE	IN	1"1/4

## Main Components

## 7) Hook Block

MAKE AND TYPE	:	BJ UNIMATIC 6250
BUILT AS PER ISO	NO	API 8-A
RATED LOAD CAPACITY	MTON	225

## 8) Swivel head

MAKE AND TYPE	:	IDECO OR EQUIVALENT
BUILT AS PER ISO	NO	API 8-C
STATIC RATED CAPACITY	MTON	315
RATED WORKING PRESSURE	PSI	5000
COMPLETE WITH ACCESS FITTING FOR WIRE LINE	IN	3"

## 9) Rig Storage Capacity

DIESEL FUEL		
DIESEL FUEL TOTAL STORAGE TANK CAPACITY	M <sup>3</sup>	23,48 MC
DIESEL FUEL STORAGE TANKS QUANTITY	NR	1 + 1
DIESEL FUEL STORAGE TANK CAPACITY OF EACH	M <sup>3</sup>	20,48 + 3,00 MC
DIESEL FUEL STORAGE TANK TO BE USED WITH MUD CAPACITY	M <sup>3</sup>	3 MC
DIESEL FUEL DAY-TANK CAPACITY M3 2	M <sup>3</sup>	2
DIESEL FUEL TRANSFER PUMPS	NR	CENTRIFUGAL
DRILLING WATER		
DRILLING WATER TOTAL CAPACITY	M <sup>3</sup>	50
TANKS QUANTITY		1
DRILL WATER TRANSFER PUMP		1
TYPE		CENTRIFUGAL

## Main Components

LIQUID MUM		
LIQUID MUD TOTAL CAPACITY	M <sup>3</sup>	240
TANKS DIMENSIONS AND NUMBER MIGHT CHANGE AS THE RIG OWNER DOES NOT HAVE A MUD TANK SYSTEM		
LIQUID MUD TANK QUANTITY	NO	3
DESANDER	Y/N	YES
DESILTER	Y/N	YES
DEGASSER	Y/N	YES
MUD MIXING UNIT	Y/N	YES
PIPE RACK		
PIPE RACK CAPACITY		300

### 10) Rig Power Plant

#### 1) ELECTRICAL POWER FOR 3RD PARTY EQUIPMENT

FOR MUD LOGGING UNIT		
POWER AVAILABLE	KVA	15
OUTPUT VOLTAGE	V	220
OUTPUT AMPERE	A	20

#### 2) POWER GENERATOR SYSTEM

DIESEL ENGINE		
DIESEL ENGINE QUANTITY NO 3	NO	3
MAKE TYPE	:	GM 12 V 71 M
DIESEL ENGINE MUFFLERS W.SPARK ARRESTOR	YES/NO	YES
MUFFLERS	TYPE	TYPE COWL

## Main Components

## 11) Rig Air Service

AIR COMPRESSOR ELECTRICAL DRIVEN		
QUANTITY NO 2	NO	2
MAKE-TYPE	:	CF 510/CE
DRIVEN BY MOTOR POWER	HP	10
MAX.FLOW RATE CAPACITY	M <sup>3</sup> /MIN	3
MAX.SERVICE PRESSURE	KG/CM <sup>2</sup>	10
AIR COMPRESSOR DIESEL DRIVEN		
QUANTITY	NO	1
MAKE-TYPE	:	G.D
DRIVEN BY MOTOR POWER	HP	Compound
MAX.FLOW RATE CAPACITY	M <sup>3</sup> /MIN	1,4
MAX.SERVICE PRESSURE	KG/CM <sup>2</sup>	10
AIR VESSEL		
QUANTITY	NO	6
AIR VESSEL CAPACITY OF EACH	M <sup>3</sup>	0,5
AIR VESSEL LOCATION	:	ON SUBSTRUCTURE

## 12) Drawworks and Accessories

DRAWWORKS		
MAKE-TYPE	:	BD 1200
RATED INPUT POWER	HP	1200
MAIN DRUM RATED PULL CAPACITY	MTON	26,8
MAIN DRUM BRAKE TYPE (BAND OR DISC)	:	BAND
MAKE UP CATHEAD MAKE-TYPE	:	FOSTER 37 AH
BREAK OUT CATHEAD MAKE-TYPE	:	FOSTER 24 AH

## Main Components

DRAWWORKS AUXILIARY BRAKE		
MAKE TYPE	:	PARMAC MOD 342 A
RATED BRAKE CAPACITY AT 50 RPM	KG.M	480
DRAWWORKS SAFETY DEVICE	HP	CF 510/CE
CROWN BLOCK SAFETY DEVICE PROTECTION	YES/NO	CROWN-O-MATIC
ADDITIONAL CROWN BLOCK SAFETY DEVICE PROTECTION ( TRAVELING BLOCK LIMIT SWITCH)	YES/NO	YES
CROWN SAFETY DEVICE C/WITH ALARMS	YES/NO	YES
DRAWWORKS DRILLING MOTORS		
QUANTITY INSTALLED NO 3	NO	3
MAKE AND TYPE : GM 12 V 71 N	:	GM 12 V 71 N
MAX OUTPUT POWER HP 370	HP	370
PRESSURIZED COOLING AER INTAKE POINT	:	OUT OF HAZARDOUS AREA
SPARK ARRESTORS	:	YES
DEAD LINE ANCHOR		
DEAD LINE ANCHOR MAKE AND TYPE	:	NATIONAL EB
BUILT AS PER ISO	NO	API 8-C
RATED LOAD CAPACITY	MTON	34
SENSOR TYPE	:	E80
LOCATION	:	SUBSTRUCTURE
DRILLING LINE		
SIZE AND LENGTH	IN-	1"1/4 8200 FT (CAPACITY OF REEL)
BREAKING STRENGTH	MTON	71
BUILT AS PER API STANDARD	NO	API 9-A



## Main Components

### 13) Rotation Equipment System

#### 1) ROTARY TABLE & ACCESSORIES

ROTARY TABLE		
MAKE AND TYPE	:	IDECO 275
API RATED LOAD CAPACITY	MTON	323
MINIMUM OPENING	IN	27"1/2
DRIVEN BY MOTOR OR DRAWWORKS	:	DRAWWORKS
MASTER BUSHING		
MAKE AND TYPE	:	VARCO MSS
API INSERT BOWL SIZE	NO	RANGE 2"3/8 ÷ 8"5/8
KELLY BUSHING		
MAKE AND TYPE	:	VARCO HDP
FOR KELLY SHAPE AND SIZE		HEX 5"1/4
API INSERT BOWL SIZE	NO	RANGE 2"3/8 ÷ 8"5/8
ROTARY TABLE ANTISLIPPING PAD		
MAKE AND TYPE	:	CUSTOM SAFETY PRODUCTS

### 14) Rig Floor Tools

COUNTERBALANCE SYSTEM FOR MANUAL TONGS		
QUANTITY	NO	2
AIR POWERED	YES/NO	MECHANIC
SPINNING WRENCH		
MAKE AND TYPE	:	VARCO SSW-10
FOR O.D.TOOL-JOINTS	IN	3"1/2 AND 5"
OTHER RIG FLOOR EQUIPMENT		
MOUSE HOLE SIZE	IN	12"1/4
RAT HOLE SIZE	IN	8"1/2
MUD SAVER BUCKET FOR OD DRILL PIPES	YES/NO	YES
MUD SAVER BUCKET FOR OD DRILL PIPES	IN	5" – 3"1/2

## Main Components

### 15) Utility Hoist Equipment

RIG FLOOR HOIST WINCH			
QUANTITY	NO	1	1
MAKE AND TYPE	:	I.R. LS 5000	I.R.
HYDRAULIC OR AIR OPERATED TYPE	:	AIR OPERATED	AIR OPERATED
RATED PULL CAPACITY	MTON	4000	1300
COMPLETE WITH SAFETY GUARD	YES/NO	YES	YES
COMPLETE WITH SAFETY LIMIT SWITCH	YES/NO	YES	YES
CERTIFIED AS PER LOCAL REGULATION	YES/NO	YES	YES
BOP HANDLING SYSTEM INSIDE THE SUBSTRUCTURE			
MAKE AND TYPE	:	HDI Trolley	
ELECTRIC OR HYDRAULIC DRIVEN	:	Manual	
RATED HOIST CAPACITY	MTON	30 TONS	
MAX.HORIZONTAL TRAVELING STROKE	M	6	

### 16) Mud Circulation System

#### 1) HIGH PRESSURE MUD PUMPS

H.P. MUD PUMPS			
TOTAL INSTALLED	NO	M. P.NO.1	M. P.NO.2
MAKE	:	NATIONAL	NATIONAL
TYPE	:	TRIPLEX	TRIPLEX
MAX RATED INPUT POWER	HP	1000	1000
FLUID END TYPE : FORGED FORGED	:	FORGED	FORGED
FLUID END TYPE WORKING PRESSURE	PSI	5000	5000
PULSATION DUMPENER MAKE	:	HYDRIL	HYDRIL
PULSATION DUMPENER TYPE	:	K 20	K 20
PULSATION DUMPENER WORKING PRESSURE	PSI	5000	5000
RESET RELIEF VALVE MAKE	:	HARRISBURG	HARRISBURG

## Main Components

MUD PUMP DRIVING MOTORS			
QUANTITY EACH MUD PUMP	NO	1	1
MOTOR MAKE	:	GM	NATIONAL
MOTOR TYPE	:	16 V 149 T	16 V 149 T
MOTOR RATED CONTINUOUS POWER	HP	1100	1100
MUD PUMP SURCHARGING PUMP			
QUANTITY EACH MUD PUMP	NO	1	
MAKE AND TYPE	:	MISSION 5 X 6	
IMPELLER DIAMETER	IN	10	
PACKING SEAL TYPE	:	W/AUTOM. LUBRIFICATION	
DRIVEN BY MOTOR POWER	HP	MUD PUMP	
MUD PUMP SUCTION LINES			
QUANTITY	NO	2	
SUCTION LINE O.D.	IN	10	
MUD PUMP SUCTION FILTERS			
QUANTITY	NO	2	
MAKE AND TYPE	:	SUCTION MUD SCREEN	
MUD PUMP DISCHARGE LINE FILTERS			
QUANTITY	NO	2	
TYPE	:	STRAINER	
MUD PUMP DISCHARGE LINES FLEXIBLE SECTION			
QUANTITY	NO	2	
INSIDE DIAMTER	IN	3"1/2	
RATED WORKING PRESSURE	PSI	4000	

## Main Components

MUD PUMP DISCHARGE LINES RIGID SECTION		
QUANTITY	NO	2
INSIDE DIAMTER	IN	4"
RATED WORKING PRESSURE	PSI	5000
RIG FLOOR MUD MANIFOLD		
ALL CONNECTION ENDS	TYPE	WELDED
MUD MANIFOLD VALVES QUANTITY	NO	9
MUD MANIFOLD VALVES MAKE-TYPE	:	BAKER
VALVES SIZE AND WORK.PRESSURE	IN-PSI	4" 5000
BLEED OFF VALVE SIZE	IN-PSI	2" 5000
BLEED OFF VALVE TYPE	:	NEEDLE
CONNECTION PROVISION FOR MUD		
LOGGING UNIT PRESSURE SENSOR	YES/NO	YES
EXCLUSION VALVE SIZE	IN-PSI	2" 5000
CONNECTION PROVISION FOR MWD SENSOR	YES/NO	2" 5000
EXCLUSION VALVE SIZE	IN-PSI	2" 5000
CASING FILL-UP VALVE SIZE	IN-PSI	3" FROM LP MUD SYSTEM
STAND PIPE ASSEMBLY RIGID SECTION		
STAND PIPE QUANTITY	NO	2
INSIDE DIAMTER	IN	4
RATED WORKING PRESSURE	PSI	5000
BUILT AS PER API SPECIFICATION	:	API 5L
ROTARY HOSES		
QUANTITY	NO	1
INSIDE DIAMTER AND LENGTH	IN-M	3"1/2 X 75'
RATED WORKING PRESSURE	PSI	5000
BUILT AS PER API SPECIFICATION	NO	API 7K GR D

## Main Components

SHALE SHAKERS PRIMARY		
QUANTITY INSTALLED NO 1	NO	1
MAKE AND TYPE	:	BRANDT ATL 1000 – LINEAR MOT
SCREEN AVAILABLE MAKE	:	BRANDT
SCREEN AVAILABLE TYPE	:	S + BLS

## 17) Lines for Cementing Jobs

HIGH PRESSURE CEMENTING LINES		
H.P. FIXED LINE CONNECTING CEMENT UNIT WITH RIG FLOOR QUANTITY	NO	1
INSIDE DIAMETER AND W.P.	IN-PSI	2" – 10000
END CONNECTION TYPE	:	WECO UNION FIG 1502

## 18) Down Hole Tubular Material

## 1) KELLIES

KELLIES		
KELLIES	NO	1
SHAPE	TYPE	HEXAGONAL
NOMINAL SIZE	IN	5 ¼' X 2 ¼"
TOTAL LENGTH	FT	40
UPPER KELLY COCK		
FOR KELLY SIZE	IN	1 PC - 5 ¼"
LOWER KELLY COCK		
FOR DP CONNECTION	TYPE	1 PC - NC50
MAKE		TIW
TYPE		KC
OUTSIDE DIAM.	IN	6 5/8
INSIDE DIAM	IN	2 ¾" '
WORKING PRESSURE	PSI	10000

## Main Components

### 19) Pipe (DP) Handling Tools

LINK ELEVATOR			
SIZE	IN	2 3/8" - 108	2 3/4" - 132
QUANTITY		1 SET	1 SET
RATED LOAD CTY	TON	315	315
DRILL PIPE ELEVATORS			
QUANTITY	NO	1	1
MAKE		VARCO BY OR EQUIVALENT	VARCO BY OR EQUIVALENT
TYPE		MGG	RG
FOR OD DRILL PIPES	IN	5"	3 1/2"
MAX. RATING LOAD CAPACITY	TON	225	135
DRILL PIPE MANUAL SLIPS			
QUANTITY	NO	1	1
MAKE		VARCO BY OR EQUIVALENT	VARCO BY OR EQUIVALENT
TYPE		SDML	SDML
FOR OD DRILL PIPES	IN	5"	3 1/2"

### 20) Instrumentation

#### 1) INSTRUMENTATION AT DRILLER'S CONSOLE

WEIGHT INDICATOR		
MAKE		MARTIN DECKER
TYPE		METRIC
WEIGHT INDICATOR SENSOR TYPE		E

## Main Components

STAND PIPE PRESSURE GAUGES		
QUANTITY		1
MAKE		MARTIN DECKER
TYPE		H6D
PRESSURE RANGE INDICATOR		0 - 350
STAND PIPE PRESSURE TRANSDUCERS		
QUANTITY	NO	1
MAKE		MARTIN DECKER
TYPE	TYPE	HYDRAULIC
PRESSURE RANGE INDICATOR		0 - 350
TONGS PULL INDICATOR		
MAKE		MARTIN DECKER
TYPE		ANALOGIC
PULL INDICTOR SENSOR	TYPE	H6A
MAX. RATED LOAD	KG	7000
MUD PUMP STROKE COUNTER INDICATOR		
QUANTITY	NO	1 FOR EACH PUMP
MAKE		BINDING
TYPE		9100
SPM INDICATOR SENSOR		DIGITAL
MUD PUMP STROKE TOTALIZER		
QUANTITY	NO	1 FOR EACH PUMP
MAKE		BINDING 9100
TYPE	TYPE	DIGITAL

## Main Components

### 21) Barracks

CONTRACTOR'S OFFICE		
QUANTITY	NO	1
DIMENSIONS		12 X 2,40 X 2,40
LIVING ROOM	Y/N	YES
SHOWER	Y/N	YES
FULL CLIMATE CONTROL	Y/N	YES
DRESSING BARRACKS		
QUANTITY	NO	1
DIMENSIONS		12 X 2,40 X 2,40
SHOWER	Y/N	YES
FULL CLIMATE CONTROL	Y/N	YES
WORKSHOP BARRACKS		
QUANTITY	NO	1
DIMENSIONS		12 X 2,40 X 2,40
WAREHOUSE BARRACKS		
QUANTITY	NO	1
DIMENSIONS		6 X 2,40 X 2,40
EXPANDABLE BARRACKS		
QUANTITY	NO	2 EXPANDABLE
DIMENSIONS		6 X 2,40 X 2,40
SHOWER	Y/N	2 EACH
TOILET	Y/N	2 EACH
WATER HEATER	Y/N	1 EACH
FULL CLIMATE CONTROL	Y/N	YES
WITH BEDS AND FURNITURE	Y/N	YES



## Main Components

### 22) Rig Completion Equipment

RIG COMPLETION EQUIPMENT		
7-1/16 FLOW TEE WITH ALL EQUIPMENT TO GO TO THE SHAKER	1	TYPE
DRILL PIPE	3000 MT	3-1/2" IF WITH 2-1/8" ID
DRILL COLLARS	20	4 3/4"
DRILLING JAR	1	TO FIT THE 3-1/2" DRILL PIPE
ELEVATORS	1	2-3/8" NUE
ELEVATORS	1	2-3/8" EUE
ELEVATORS	1	2-7/8" NUE
ELEVATORS	1	2-7/8" EUE
ELEVATORS	1	2-7/8" DRILL PIPE
ELEVATORS	1	3-1/2" DRILL PIPE
SLIPS	1	2-3/8"
SLIPS	1	2-7/8"
SLIPS	1	3-1/2"
SLIPS	1	FOR DRILLING COLLARS
SAFETY CLAMP	1	FOR 4 1/4 AND 5" DC
POWER TONGS	1	FOR MAKEUP AND BRAKE OUT OF TUBING AND DRILL PIPE
PIPE WRENCHES	1	FOR WORKING WITH TUBING
BUMPER SUB	1	OD 4-1/4" 2-7/8" IF CONNECTIONS
FISHING JAR	1	OD 4-1/4" 2-7/8" IF CONNECTIONS
DRILL COLLARS	10	5"
DRILL COLLARS	10	4-1/4"
DRILLING JAR	1	YES

## Main Components

BOP CONTROL UNIT 1 Koomey	1	Koomey
KOOMEY CONTROL PANEL 1 yes	1	YES
TOOL PUSHER CONTROL PANEL 1 yes	1	YES
BOP SPOOL FLANGED 7 1/16 X CASING FLANGE	1	YES
CHOKE/KILL VALVES 2 2 1/16	2	2 1/16
BOP RAMS 4	4	2 3/8, 2 7/8", 3 1/2" , blind
CHOKE MANIFOLD – KILL MANIFOLD 1 yes	1	YES
CHOKE MANIFOLD CONTROL BOX 1 yes	1	YES

