

Well Name: RUTHLESS 11 FED COM	Well Location: T25S / R32E / SEC 11 / NENW / 32.1505799 / -103.6496378	County or Parish/State: LEA / NM
Well Number: 503H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM110835	Unit or CA Name:	Unit or CA Number:
US Well Number: 300254822300X1	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

Notice of Intent

Type of Submission: Notice of Intent	Type of Action Other
Date Sundry Submitted: 04/05/2021	Time Sundry Submitted: 06:40
Date proposed operation will begin: 05/19/2021	

Procedure Description: EOG respectfully requests an amendment to our approved APD for this well to reflect the following changes: Update casing program to current design with 6" production casing Change SHL to T-25-S R-32-E Sec 11 622 feet FNL 1440 feet FWL Lea Co, NM Change BHL to T-25-S R-32-E Sec 14 100 feet FSL 1250 feet FWL Lea Co, NM

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- 6.000in_24.50_VST_P110EC_VAM_SFC_Draft_CDS_USA__1__20210405063944.pdf
- 6.000in_24.50__0.400in_Wall__VST_P110EC_DWC_C_IS_CDS_AB_20210405063944.PDF
- 10_M_Choke_Manifold_20210401082617.pdf
- Wellhead_9.675_in_20210401082617.pdf
- Ruthless_11_Fed_Com_503H_Wall_Plot_20210401082617.pdf
- Ruthless_11_Fed_Com_503H_Planning_Report_20210401082617.pdf
- Ruthless_11_Fed_Com_503H_Permit_Info___Revised_SHL__BHL__csg_3.29.2021_20210401082616.pdf
- EOG_BLM_10M_Annular_Variance___9.675_in_20210401082616.pdf
- Co_Flex_Hose_Test_Chart_20210401082616.pdf

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US Well Number: 300254822300X1	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

10_M_BOP_Diagram_9.675_in_20210401082616.pdf

Co_Flex_Hose_Certification_20210401082616.pdf

RUTHLESS_11_FED_COM_503H_C_102_20210401082606.pdf

Conditions of Approval

Additional Reviews

Ruthless_Master_SurfaceUse_COAs_20210414144738.pdf

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: STAR HARRELL

Signed on: APR 05, 2021 06:39 AM

Name: EOG RESOURCES INCORPORATED

Title: Regulatory Specialist

Street Address: 5509 CHAMPIONS DRIVE

City: MIDLAND**State:** TX

Phone: (432) 848-9161

Email address: Star_Harrell@eogresources.com

Field Representative

Representative Name:

Street Address:

City:**State:****Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 04/29/2021

Signature: Chris Walls

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-48223	² Pool Code 97903	³ Pool Name WC-025 G-08 S253235G; Lower Bone Spring
⁴ Property Code 329701	⁵ Property Name RUTHLESS 11 FED COM	
⁷ OGRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁶ Well Number 503H
⁹ Elevation 3498'		

¹⁰Surface Location

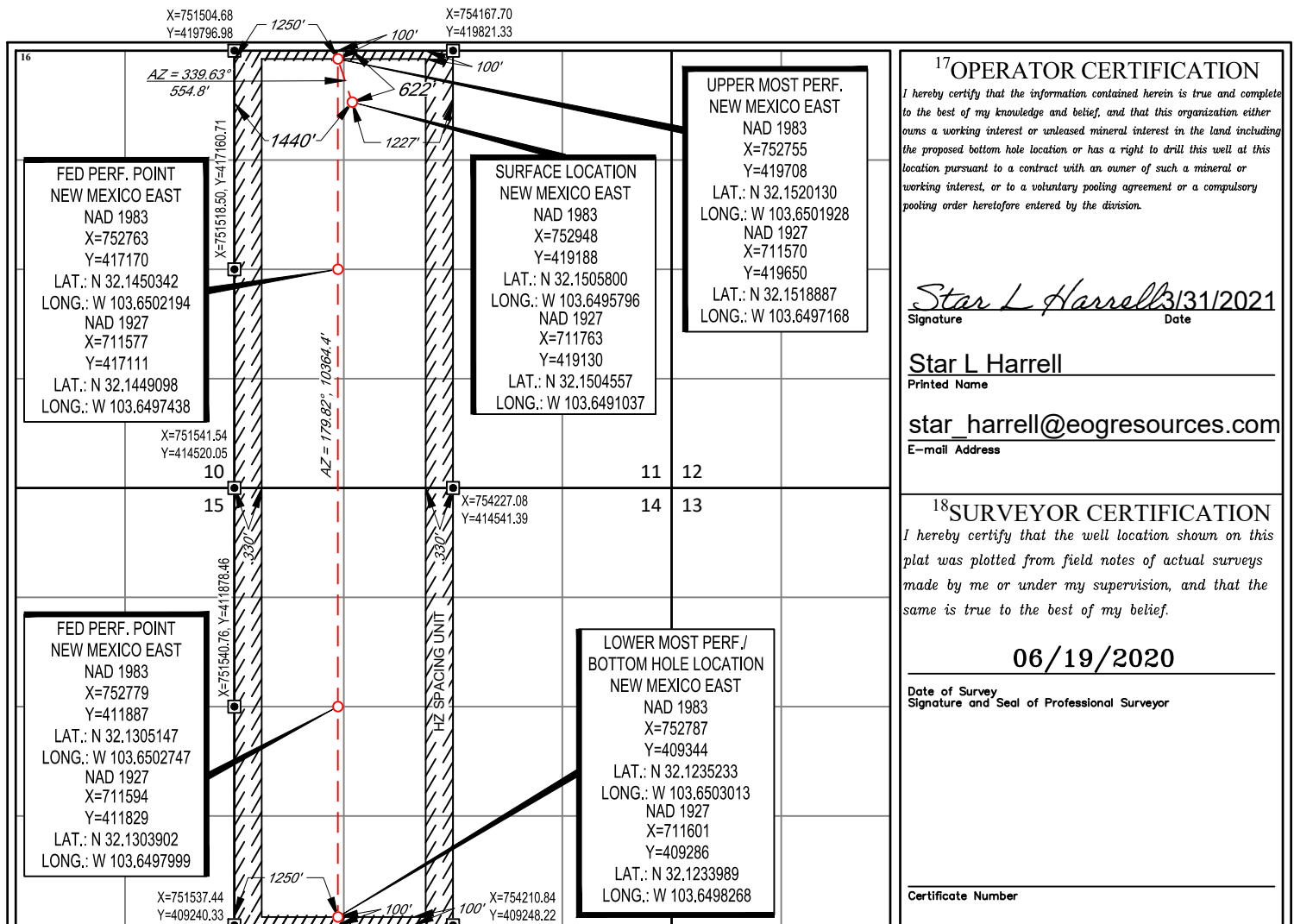
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	11	25-S	32-E	-	622'	NORTH	1440'	WEST	LEA

¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	14	25-S	32-E	-	100'	SOUTH	1250'	WEST	LEA

¹² Dedicated Acres 640.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



Revised Permit Information 3/29/2021:

Well Name: Ruthless 11 Fed Com #503H

Location:

SHL: 622' FNL & 1440' FWL, Section 11, T-25-S, R-32-E, Lea Co., N.M.

BHL: 100' FSL & 1250' FWL, Section 14, T-25-S, R-32-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
16"	0' – 1,050'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0' – 4,000'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,760'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0' – 11,189'	6"	24.5#	P-110EC	VAM SFC	1.125	1.25	1.60
7.875"	11,189' – 21,131'	6"	24.5#	P-110EC	VAM SFC	1.125	1.25	1.60

Variance is requested to wave the centralizer requirements for the 9-5/8" casing in the 12-1/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 12-1/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to wave any centralizer requirements for the 6" casing in the 8-3/4" and 7-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" and 7-7/8" hole interval to maximize cement bond and zonal isolation.

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /sk	Slurry Description
1,000' 13-3/8"	320	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	100	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 850')
4,670' 9-5/8"	700	14.2	1.11	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	300	14.8	1.5	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 3,808')
11,189' 6"	620	11.0	1.31	Lead: Class C + 3% CaCl ₂ + 3% Microbond (TOC @ 4,260')
21,131' 6"	2590	14.0	1.2	Tail: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,448')

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

Mud Program:

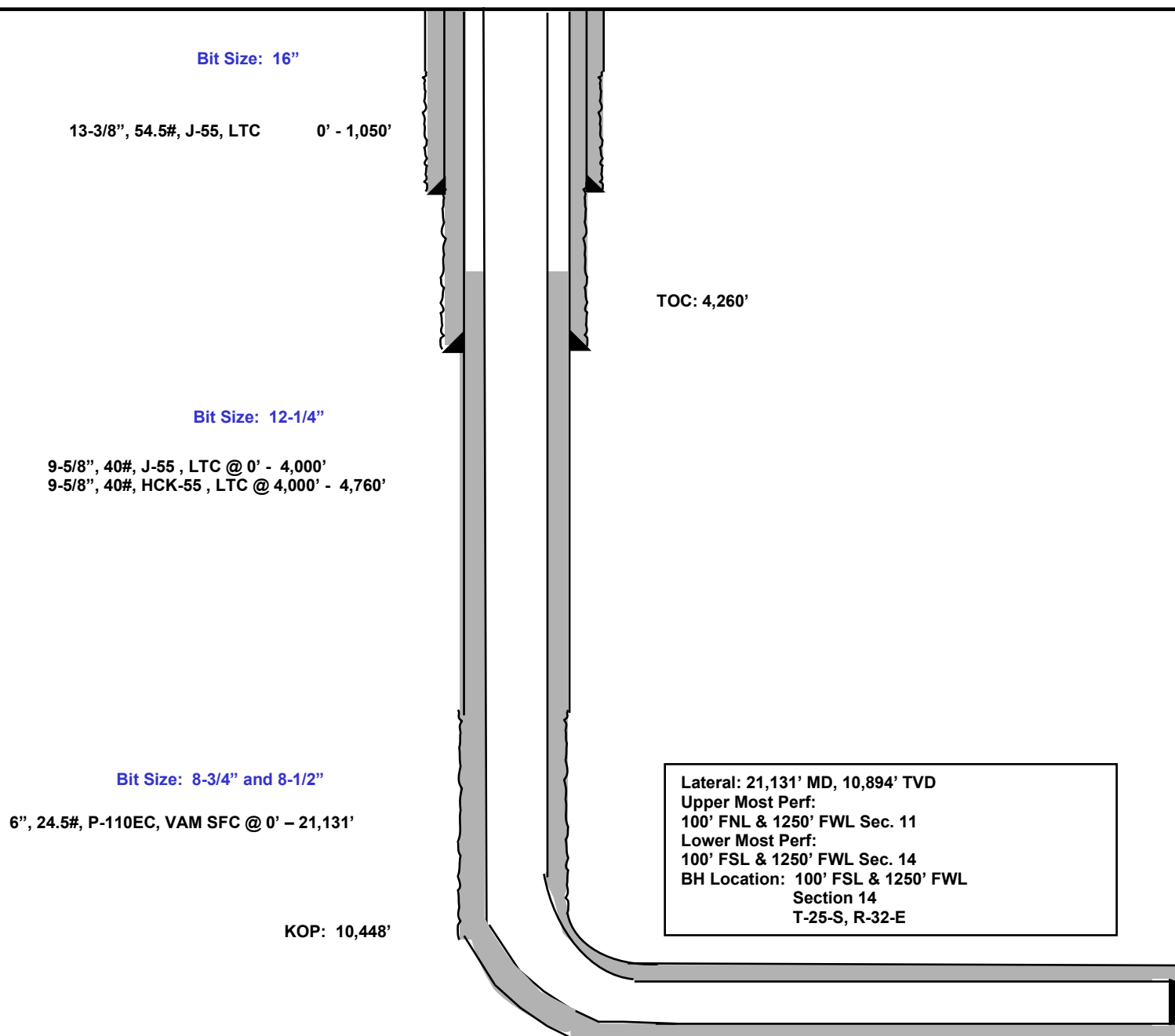
Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,050'	Fresh - Gel	8.6-8.8	28-34	N/c
1,050' – 4,760'	Brine	8.6-8.8	28-34	N/c
4,760' – 21,131'	Oil Base	8.8-9.5	58-68	N/c - 6

622' FNL
1440' FWL
Section 11
T-25-S, R-32-E

Revised Wellbore

KB: 3,523'
GL: 3,498'

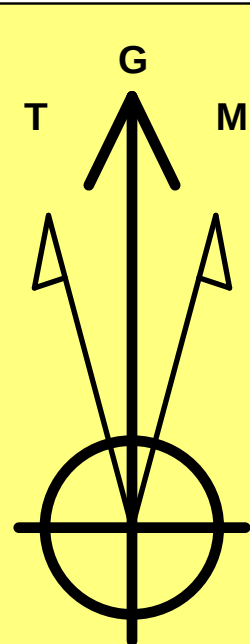
API: 30-025-48223



Lea County, NM (NAD 83 NME)

Ruthless 11 Fed Com #503H

Plan #0.2



Azimuths to Grid North
True North: -0.36°
Magnetic North: 6.36°

Magnetic Field
Strength: 47637.1nT
Dip Angle: 59.95°
Date: 11/18/2019
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.36°
To convert a Magnetic Direction to a True Direction, Add 6.72° East
To convert a True Direction to a Grid Direction, Subtract 0.36°

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: #503H

KB = 25 @ 3523.0usft 3498.0
Northing 419188.00 Easting 752948.00 Latitude 32° 9' 2.085 N Longitude 103° 38' 58.487 W

SECTION DETAILS

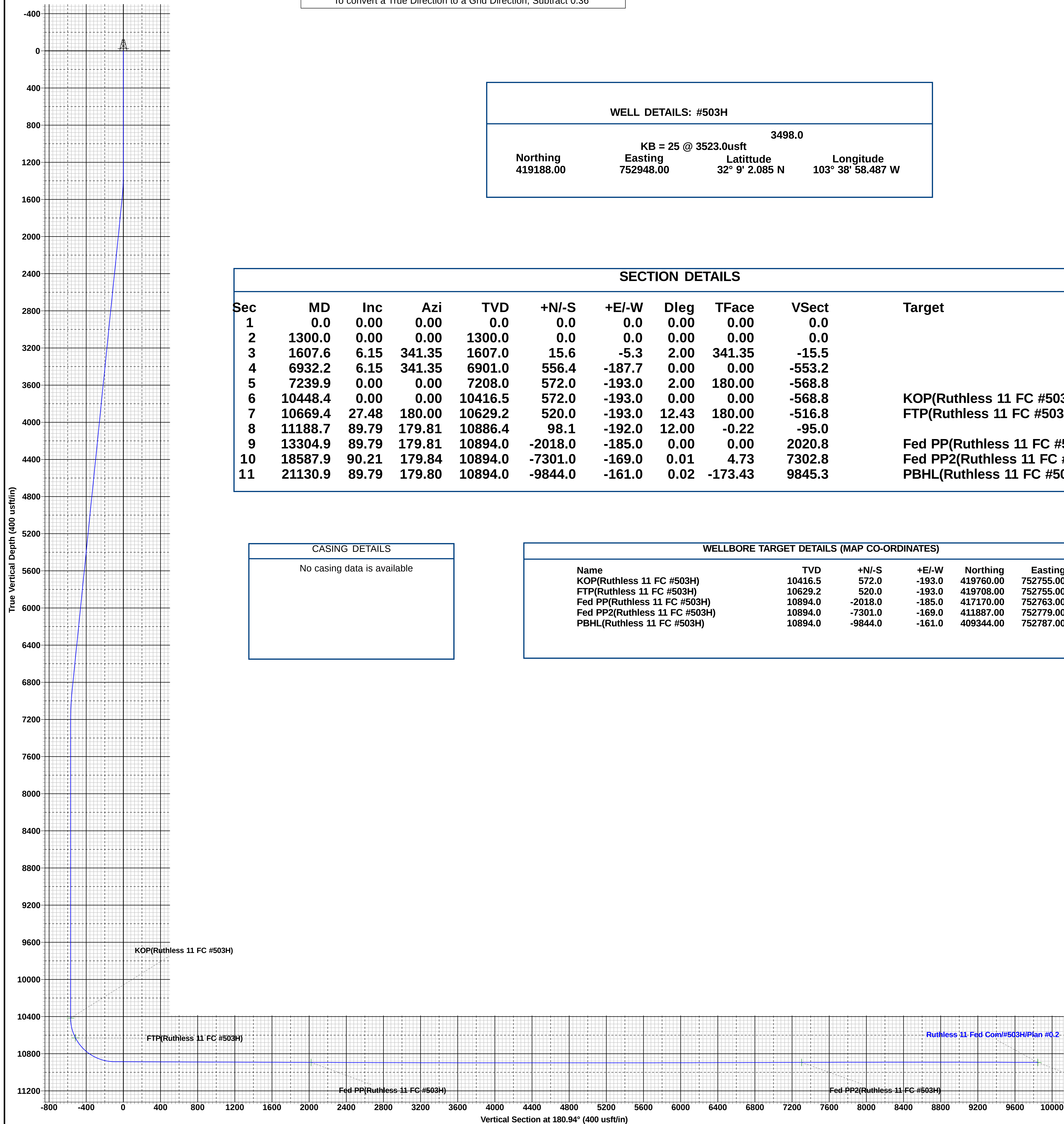
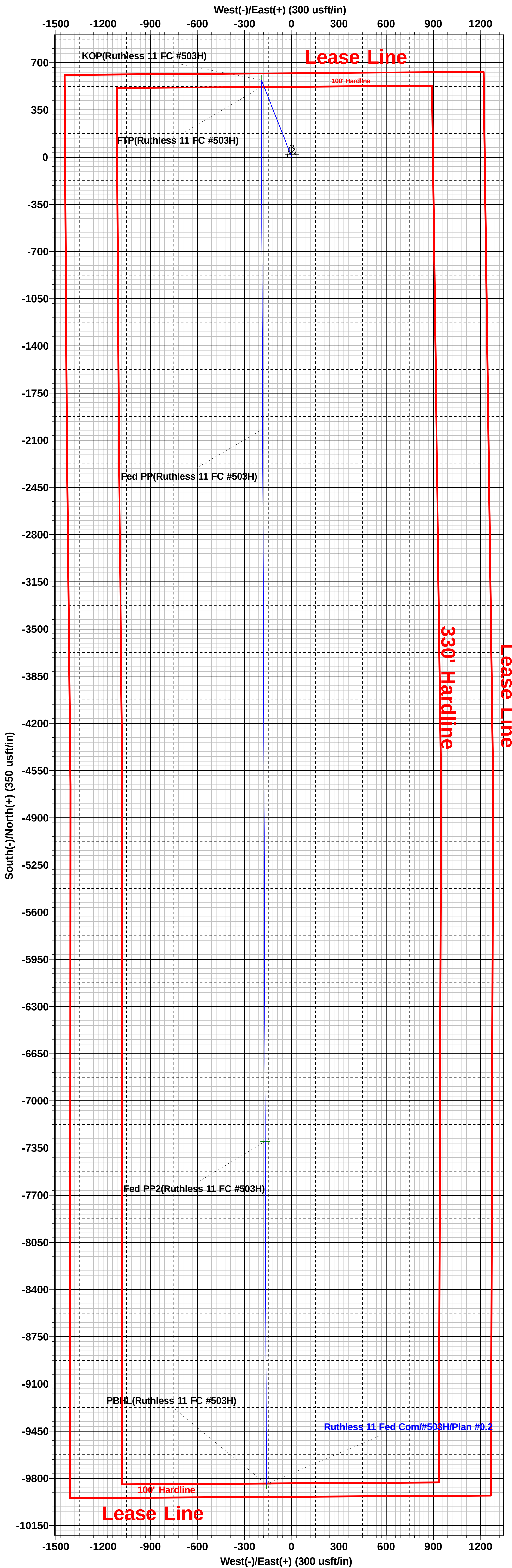
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1300.0	0.00	0.00	1300.0	0.0	0.0	0.00	0.00	0.0	
3	1607.6	6.15	341.35	1607.0	15.6	-5.3	2.00	341.35	-15.5	
4	6932.2	6.15	341.35	6901.0	556.4	-187.7	0.00	0.00	-553.2	
5	7239.9	0.00	0.00	7208.0	572.0	-193.0	2.00	180.00	-568.8	
6	10448.4	0.00	0.00	10416.5	572.0	-193.0	0.00	0.00	-568.8	KOP(Ruthless 11 FC #503H)
7	10669.4	27.48	180.00	10629.2	520.0	-193.0	12.43	180.00	-516.8	FTP(Ruthless 11 FC #503H)
8	11188.7	89.79	179.81	10886.4	98.1	-192.0	12.00	-0.22	-95.0	
9	13304.9	89.79	179.81	10894.0	-2018.0	-185.0	0.00	0.00	2020.8	Fed PP(Ruthless 11 FC #503H)
10	18587.9	90.21	179.84	10894.0	-7301.0	-169.0	0.01	4.73	7302.8	Fed PP2(Ruthless 11 FC #503H)
11	21130.9	89.79	179.80	10894.0	-9844.0	-161.0	0.02	-173.43	9845.3	PBHL(Ruthless 11 FC #503H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Ruthless 11 FC #503H)	10416.5	572.0	-193.0	419760.00	752755.00
FTP(Ruthless 11 FC #503H)	10629.2	520.0	-193.0	419708.00	752755.00
Fed PP(Ruthless 11 FC #503H)	10894.0	-2018.0	-185.0	417170.00	752763.00
Fed PP2(Ruthless 11 FC #503H)	10894.0	-7301.0	-169.0	411887.00	752779.00
PBHL(Ruthless 11 FC #503H)	10894.0	-9844.0	-161.0	409344.00	752787.00





EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Ruthless 11 Fed Com

#503H

OH

Plan: Plan #0.2

Standard Planning Report

31 March, 2021

EOG Resources

Planning Report



Database:	EDM 5000.14	Local Co-ordinate Reference	Well #503H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3523.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3523.0usft
Site:	Ruthless 11 Fed Com	North Reference:	Grid
Well:	#503H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Ruthless 11 Fed Com		
Site Position:		Northing:	419,142.00 usft
From:	Map	Easting:	752,042.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 9' 1.687 N
		Longitude:	103° 39' 9.029 W
		Grid Convergence:	0.36 °

Well	#503H					
Well Position	+N/-S	46.0 usft	Northing:	419,188.00 usft	Latitude:	32° 9' 2.085 N
	+E/-W	906.0 usft	Easting:	752,948.00 usft	Longitude:	103° 38' 58.487 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,498.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2015	11/18/2019	6.72	59.95	47,637.09911731

Design	Plan #0.2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	180.94

Plan Survey Tool Program	Date	3/31/2021		
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks
(usft)	(usft)			
1	0.0	21,130.9 Plan #0.2 (OH)	MWD	
			OWSG MWD - Standard	

EOG Resources

Planning Report



Database:	EDM 5000.14	Local Co-ordinate Reference	Well #503H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3523.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3523.0usft
Site:	Ruthless 11 Fed Com	North Reference:	Grid
Well:	#503H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,607.6	6.15	341.35	1,607.0	15.6	-5.3	2.00	2.00	0.00	341.35	
6,932.2	6.15	341.35	6,901.0	556.4	-187.7	0.00	0.00	0.00	0.00	
7,239.9	0.00	0.00	7,208.0	572.0	-193.0	2.00	-2.00	0.00	180.00	
10,448.4	0.00	0.00	10,416.5	572.0	-193.0	0.00	0.00	0.00	0.00	KOP(Ruthless 11 FC :
10,669.4	27.48	180.00	10,629.2	520.0	-193.0	12.43	12.43	81.42	180.00	FTP(Ruthless 11 FC #
11,188.7	89.79	179.81	10,886.4	98.1	-192.0	12.00	12.00	-0.04	-0.22	
13,304.9	89.79	179.81	10,894.0	-2,018.0	-185.0	0.00	0.00	0.00	0.00	Fed PP(Ruthless 11 F
18,587.9	90.21	179.84	10,894.0	-7,301.0	-169.0	0.01	0.01	0.00	4.73	Fed PP2(Ruthless 11
21,130.9	89.79	179.80	10,894.0	-9,844.0	-161.0	0.02	-0.02	0.00	-173.43	PBHL(Ruthless 11 FC

EOG Resources

Planning Report



Database:	EDM 5000.14	Local Co-ordinate Reference	Well #503H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3523.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3523.0usft
Site:	Ruthless 11 Fed Com	North Reference:	Grid
Well:	#503H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,400.0	2.00	341.35	1,400.0	1.7	-0.6	-1.6	2.00	2.00	0.00	
1,500.0	4.00	341.35	1,499.8	6.6	-2.2	-6.6	2.00	2.00	0.00	
1,607.6	6.15	341.35	1,607.0	15.6	-5.3	-15.5	2.00	2.00	0.00	
1,700.0	6.15	341.35	1,698.9	25.0	-8.4	-24.9	0.00	0.00	0.00	
1,800.0	6.15	341.35	1,798.3	35.2	-11.9	-35.0	0.00	0.00	0.00	
1,900.0	6.15	341.35	1,897.7	45.3	-15.3	-45.1	0.00	0.00	0.00	
2,000.0	6.15	341.35	1,997.1	55.5	-18.7	-55.2	0.00	0.00	0.00	
2,100.0	6.15	341.35	2,096.6	65.6	-22.1	-65.3	0.00	0.00	0.00	
2,200.0	6.15	341.35	2,196.0	75.8	-25.6	-75.4	0.00	0.00	0.00	
2,300.0	6.15	341.35	2,295.4	85.9	-29.0	-85.5	0.00	0.00	0.00	
2,400.0	6.15	341.35	2,394.8	96.1	-32.4	-95.6	0.00	0.00	0.00	
2,500.0	6.15	341.35	2,494.3	106.3	-35.9	-105.7	0.00	0.00	0.00	
2,600.0	6.15	341.35	2,593.7	116.4	-39.3	-115.8	0.00	0.00	0.00	
2,700.0	6.15	341.35	2,693.1	126.6	-42.7	-125.9	0.00	0.00	0.00	
2,800.0	6.15	341.35	2,792.5	136.7	-46.1	-136.0	0.00	0.00	0.00	
2,900.0	6.15	341.35	2,892.0	146.9	-49.6	-146.0	0.00	0.00	0.00	
3,000.0	6.15	341.35	2,991.4	157.0	-53.0	-156.1	0.00	0.00	0.00	
3,100.0	6.15	341.35	3,090.8	167.2	-56.4	-166.2	0.00	0.00	0.00	
3,200.0	6.15	341.35	3,190.2	177.3	-59.8	-176.3	0.00	0.00	0.00	
3,300.0	6.15	341.35	3,289.7	187.5	-63.3	-186.4	0.00	0.00	0.00	
3,400.0	6.15	341.35	3,389.1	197.7	-66.7	-196.5	0.00	0.00	0.00	
3,500.0	6.15	341.35	3,488.5	207.8	-70.1	-206.6	0.00	0.00	0.00	
3,600.0	6.15	341.35	3,587.9	218.0	-73.5	-216.7	0.00	0.00	0.00	
3,700.0	6.15	341.35	3,687.4	228.1	-77.0	-226.8	0.00	0.00	0.00	
3,800.0	6.15	341.35	3,786.8	238.3	-80.4	-236.9	0.00	0.00	0.00	
3,900.0	6.15	341.35	3,886.2	248.4	-83.8	-247.0	0.00	0.00	0.00	
4,000.0	6.15	341.35	3,985.6	258.6	-87.3	-257.1	0.00	0.00	0.00	
4,100.0	6.15	341.35	4,085.1	268.7	-90.7	-267.2	0.00	0.00	0.00	
4,200.0	6.15	341.35	4,184.5	278.9	-94.1	-277.3	0.00	0.00	0.00	
4,300.0	6.15	341.35	4,283.9	289.1	-97.5	-287.4	0.00	0.00	0.00	
4,400.0	6.15	341.35	4,383.3	299.2	-101.0	-297.5	0.00	0.00	0.00	
4,500.0	6.15	341.35	4,482.7	309.4	-104.4	-307.6	0.00	0.00	0.00	
4,600.0	6.15	341.35	4,582.2	319.5	-107.8	-317.7	0.00	0.00	0.00	
4,700.0	6.15	341.35	4,681.6	329.7	-111.2	-327.8	0.00	0.00	0.00	
4,800.0	6.15	341.35	4,781.0	339.8	-114.7	-337.9	0.00	0.00	0.00	
4,900.0	6.15	341.35	4,880.4	350.0	-118.1	-348.0	0.00	0.00	0.00	
5,000.0	6.15	341.35	4,979.9	360.1	-121.5	-358.1	0.00	0.00	0.00	
5,100.0	6.15	341.35	5,079.3	370.3	-124.9	-368.2	0.00	0.00	0.00	
5,200.0	6.15	341.35	5,178.7	380.5	-128.4	-378.3	0.00	0.00	0.00	

EOG Resources

Planning Report



Database:	EDM 5000.14	Local Co-ordinate Reference	Well #503H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3523.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3523.0usft
Site:	Ruthless 11 Fed Com	North Reference:	Grid
Well:	#503H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,300.0	6.15	341.35	5,278.1	390.6	-131.8	-388.4	0.00	0.00	0.00	
5,400.0	6.15	341.35	5,377.6	400.8	-135.2	-398.5	0.00	0.00	0.00	
5,500.0	6.15	341.35	5,477.0	410.9	-138.6	-408.6	0.00	0.00	0.00	
5,600.0	6.15	341.35	5,576.4	421.1	-142.1	-418.7	0.00	0.00	0.00	
5,700.0	6.15	341.35	5,675.8	431.2	-145.5	-428.8	0.00	0.00	0.00	
5,800.0	6.15	341.35	5,775.3	441.4	-148.9	-438.9	0.00	0.00	0.00	
5,900.0	6.15	341.35	5,874.7	451.5	-152.4	-449.0	0.00	0.00	0.00	
6,000.0	6.15	341.35	5,974.1	461.7	-155.8	-459.1	0.00	0.00	0.00	
6,100.0	6.15	341.35	6,073.5	471.8	-159.2	-469.2	0.00	0.00	0.00	
6,200.0	6.15	341.35	6,173.0	482.0	-162.6	-479.3	0.00	0.00	0.00	
6,300.0	6.15	341.35	6,272.4	492.2	-166.1	-489.4	0.00	0.00	0.00	
6,400.0	6.15	341.35	6,371.8	502.3	-169.5	-499.5	0.00	0.00	0.00	
6,500.0	6.15	341.35	6,471.2	512.5	-172.9	-509.6	0.00	0.00	0.00	
6,600.0	6.15	341.35	6,570.7	522.6	-176.3	-519.7	0.00	0.00	0.00	
6,700.0	6.15	341.35	6,670.1	532.8	-179.8	-529.8	0.00	0.00	0.00	
6,800.0	6.15	341.35	6,769.5	542.9	-183.2	-539.9	0.00	0.00	0.00	
6,900.0	6.15	341.35	6,868.9	553.1	-186.6	-550.0	0.00	0.00	0.00	
6,932.2	6.15	341.35	6,901.0	556.4	-187.7	-553.2	0.00	0.00	0.00	
7,000.0	4.80	341.35	6,968.4	562.5	-189.8	-559.3	2.00	-2.00	0.00	
7,100.0	2.80	341.35	7,068.2	568.8	-191.9	-565.6	2.00	-2.00	0.00	
7,200.0	0.80	341.35	7,168.1	571.7	-192.9	-568.5	2.00	-2.00	0.00	
7,239.9	0.00	0.00	7,208.0	572.0	-193.0	-568.8	2.00	-2.00	0.00	
7,300.0	0.00	0.00	7,268.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,368.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,468.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,568.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,668.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,768.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,868.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,968.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,068.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,168.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,268.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,368.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,468.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,568.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,668.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,768.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,868.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,968.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,068.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,168.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,268.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,368.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,468.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,568.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,668.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,768.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,868.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,968.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,068.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,168.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
10,300.0	0.00	0.00	10,268.1	572.0	-193.0	-568.8	0.00	0.00	0.00	

EOG Resources

Planning Report



Database:	EDM 5000.14	Local Co-ordinate Reference	Well #503H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3523.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3523.0usft
Site:	Ruthless 11 Fed Com	North Reference:	Grid
Well:	#503H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,400.0	0.00	0.00	10,368.1	572.0	-193.0	-568.8	0.00	0.00	0.00	
10,448.4	0.00	0.00	10,416.5	572.0	-193.0	-568.8	0.00	0.00	0.00	
KOP(Ruthless 11 FC #503H)										
10,450.0	0.20	180.00	10,418.1	572.0	-193.0	-568.8	12.43	12.43	0.00	
10,475.0	3.31	180.00	10,443.1	571.2	-193.0	-568.0	12.43	12.43	0.00	
10,500.0	6.42	180.00	10,468.0	569.1	-193.0	-565.9	12.43	12.43	0.00	
10,525.0	9.53	180.00	10,492.8	565.6	-193.0	-562.4	12.43	12.43	0.00	
10,550.0	12.63	180.00	10,517.3	560.8	-193.0	-557.6	12.43	12.43	0.00	
10,575.0	15.74	180.00	10,541.6	554.7	-193.0	-551.5	12.43	12.43	0.00	
10,600.0	18.85	180.00	10,565.4	547.3	-193.0	-544.1	12.43	12.43	0.00	
10,625.0	21.95	180.00	10,588.9	538.6	-193.0	-535.3	12.43	12.43	0.00	
10,650.0	25.06	180.00	10,611.8	528.6	-193.0	-525.4	12.43	12.43	0.00	
10,669.4	27.48	180.00	10,629.2	520.0	-193.0	-516.8	12.43	12.43	0.00	
FTP(Ruthless 11 FC #503H)										
10,675.0	28.14	179.99	10,634.1	517.4	-193.0	-514.2	12.00	12.00	-0.10	
10,700.0	31.14	179.97	10,655.9	505.0	-193.0	-501.8	12.00	12.00	-0.09	
10,725.0	34.14	179.96	10,676.9	491.6	-193.0	-488.3	12.00	12.00	-0.07	
10,750.0	37.14	179.94	10,697.2	477.0	-193.0	-473.8	12.00	12.00	-0.06	
10,775.0	40.14	179.93	10,716.7	461.4	-193.0	-458.2	12.00	12.00	-0.05	
10,800.0	43.14	179.91	10,735.4	444.8	-192.9	-441.5	12.00	12.00	-0.05	
10,825.0	46.14	179.90	10,753.2	427.2	-192.9	-424.0	12.00	12.00	-0.04	
10,850.0	49.14	179.89	10,770.0	408.7	-192.9	-405.5	12.00	12.00	-0.04	
10,875.0	52.14	179.89	10,785.9	389.4	-192.8	-386.2	12.00	12.00	-0.03	
10,900.0	55.14	179.88	10,800.7	369.3	-192.8	-366.1	12.00	12.00	-0.03	
10,925.0	58.14	179.87	10,814.5	348.4	-192.7	-345.2	12.00	12.00	-0.03	
10,950.0	61.14	179.86	10,827.1	326.8	-192.7	-323.6	12.00	12.00	-0.03	
10,975.0	64.14	179.86	10,838.6	304.6	-192.6	-301.4	12.00	12.00	-0.03	
11,000.0	67.14	179.85	10,848.9	281.8	-192.6	-278.7	12.00	12.00	-0.03	
11,025.0	70.14	179.84	10,858.0	258.6	-192.5	-255.4	12.00	12.00	-0.02	
11,050.0	73.14	179.84	10,865.9	234.8	-192.5	-231.7	12.00	12.00	-0.02	
11,075.0	76.14	179.83	10,872.5	210.7	-192.4	-207.6	12.00	12.00	-0.02	
11,100.0	79.14	179.83	10,877.8	186.3	-192.3	-183.1	12.00	12.00	-0.02	
11,125.0	82.14	179.82	10,881.9	161.6	-192.2	-158.5	12.00	12.00	-0.02	
11,150.0	85.14	179.82	10,884.7	136.8	-192.2	-133.6	12.00	12.00	-0.02	
11,175.0	88.14	179.81	10,886.1	111.9	-192.1	-108.7	12.00	12.00	-0.02	
11,188.7	89.79	179.81	10,886.4	98.1	-192.0	-95.0	12.00	12.00	-0.02	
11,200.0	89.79	179.81	10,886.4	86.9	-192.0	-83.7	0.00	0.00	0.00	
11,300.0	89.79	179.81	10,886.8	-13.1	-191.7	16.3	0.00	0.00	0.00	
11,400.0	89.79	179.81	10,887.1	-113.1	-191.3	116.3	0.00	0.00	0.00	
11,500.0	89.79	179.81	10,887.5	-213.1	-191.0	216.2	0.00	0.00	0.00	
11,600.0	89.79	179.81	10,887.9	-313.1	-190.7	316.2	0.00	0.00	0.00	
11,700.0	89.79	179.81	10,888.2	-413.1	-190.3	416.2	0.00	0.00	0.00	
11,800.0	89.79	179.81	10,888.6	-513.1	-190.0	516.2	0.00	0.00	0.00	
11,900.0	89.79	179.81	10,888.9	-613.1	-189.7	616.2	0.00	0.00	0.00	
12,000.0	89.79	179.81	10,889.3	-713.1	-189.3	716.1	0.00	0.00	0.00	
12,100.0	89.79	179.81	10,889.7	-813.1	-189.0	816.1	0.00	0.00	0.00	
12,200.0	89.79	179.81	10,890.0	-913.1	-188.7	916.1	0.00	0.00	0.00	
12,300.0	89.79	179.81	10,890.4	-1,013.1	-188.3	1,016.1	0.00	0.00	0.00	
12,400.0	89.79	179.81	10,890.7	-1,113.1	-188.0	1,116.1	0.00	0.00	0.00	
12,500.0	89.79	179.81	10,891.1	-1,213.1	-187.7	1,216.0	0.00	0.00	0.00	
12,600.0	89.79	179.81	10,891.5	-1,313.1	-187.3	1,316.0	0.00	0.00	0.00	
12,700.0	89.79	179.81	10,891.8	-1,413.1	-187.0	1,416.0	0.00	0.00	0.00	
12,800.0	89.79	179.81	10,892.2	-1,513.1	-186.7	1,516.0	0.00	0.00	0.00	

EOG Resources

Planning Report



Database:	EDM 5000.14	Local Co-ordinate Reference	Well #503H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3523.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3523.0usft
Site:	Ruthless 11 Fed Com	North Reference:	Grid
Well:	#503H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,900.0	89.79	179.81	10,892.5	-1,613.1	-186.3	1,616.0	0.00	0.00	0.00	
13,000.0	89.79	179.81	10,892.9	-1,713.1	-186.0	1,715.9	0.00	0.00	0.00	
13,100.0	89.79	179.81	10,893.3	-1,813.1	-185.7	1,815.9	0.00	0.00	0.00	
13,200.0	89.79	179.81	10,893.6	-1,913.1	-185.3	1,915.9	0.00	0.00	0.00	
13,304.9	89.79	179.81	10,894.0	-2,018.0	-185.0	2,020.8	0.00	0.00	0.00	
Fed PP(Ruthless 11 FC #503H)										
13,400.0	89.80	179.81	10,894.3	-2,113.1	-184.7	2,115.9	0.01	0.01	0.00	
13,500.0	89.81	179.81	10,894.7	-2,213.1	-184.4	2,215.8	0.01	0.01	0.00	
13,600.0	89.82	179.81	10,895.0	-2,313.1	-184.0	2,315.8	0.01	0.01	0.00	
13,700.0	89.82	179.81	10,895.3	-2,413.1	-183.7	2,415.8	0.01	0.01	0.00	
13,800.0	89.83	179.81	10,895.6	-2,513.1	-183.4	2,515.8	0.01	0.01	0.00	
13,900.0	89.84	179.81	10,895.9	-2,613.1	-183.0	2,615.8	0.01	0.01	0.00	
14,000.0	89.85	179.81	10,896.2	-2,713.1	-182.7	2,715.7	0.01	0.01	0.00	
14,100.0	89.86	179.81	10,896.4	-2,813.1	-182.4	2,815.7	0.01	0.01	0.00	
14,200.0	89.86	179.82	10,896.7	-2,913.1	-182.1	2,915.7	0.01	0.01	0.00	
14,300.0	89.87	179.82	10,896.9	-3,013.1	-181.7	3,015.7	0.01	0.01	0.00	
14,400.0	89.88	179.82	10,897.1	-3,113.1	-181.4	3,115.7	0.01	0.01	0.00	
14,500.0	89.89	179.82	10,897.3	-3,213.1	-181.1	3,215.6	0.01	0.01	0.00	
14,600.0	89.89	179.82	10,897.5	-3,313.1	-180.8	3,315.6	0.01	0.01	0.00	
14,700.0	89.90	179.82	10,897.7	-3,413.1	-180.5	3,415.6	0.01	0.01	0.00	
14,800.0	89.91	179.82	10,897.9	-3,513.1	-180.2	3,515.6	0.01	0.01	0.00	
14,900.0	89.92	179.82	10,898.0	-3,613.1	-179.8	3,615.6	0.01	0.01	0.00	
15,000.0	89.93	179.82	10,898.1	-3,713.1	-179.5	3,715.5	0.01	0.01	0.00	
15,100.0	89.93	179.82	10,898.3	-3,813.1	-179.2	3,815.5	0.01	0.01	0.00	
15,200.0	89.94	179.82	10,898.4	-3,913.1	-178.9	3,915.5	0.01	0.01	0.00	
15,300.0	89.95	179.82	10,898.5	-4,013.1	-178.6	4,015.5	0.01	0.01	0.00	
15,400.0	89.96	179.82	10,898.6	-4,113.1	-178.3	4,115.5	0.01	0.01	0.00	
15,500.0	89.97	179.82	10,898.6	-4,213.1	-178.0	4,215.4	0.01	0.01	0.00	
15,600.0	89.97	179.82	10,898.7	-4,313.1	-177.7	4,315.4	0.01	0.01	0.00	
15,700.0	89.98	179.82	10,898.7	-4,413.1	-177.4	4,415.4	0.01	0.01	0.00	
15,800.0	89.99	179.83	10,898.7	-4,513.1	-177.1	4,515.4	0.01	0.01	0.00	
15,900.0	90.00	179.83	10,898.8	-4,613.1	-176.7	4,615.4	0.01	0.01	0.00	
16,000.0	90.00	179.83	10,898.8	-4,713.1	-176.4	4,715.4	0.01	0.01	0.00	
16,100.0	90.01	179.83	10,898.7	-4,813.1	-176.1	4,815.3	0.01	0.01	0.00	
16,200.0	90.02	179.83	10,898.7	-4,913.1	-175.8	4,915.3	0.01	0.01	0.00	
16,300.0	90.03	179.83	10,898.7	-5,013.1	-175.5	5,015.3	0.01	0.01	0.00	
16,400.0	90.04	179.83	10,898.6	-5,113.1	-175.2	5,115.3	0.01	0.01	0.00	
16,500.0	90.04	179.83	10,898.6	-5,213.1	-174.9	5,215.3	0.01	0.01	0.00	
16,600.0	90.05	179.83	10,898.5	-5,313.1	-174.7	5,315.2	0.01	0.01	0.00	
16,700.0	90.06	179.83	10,898.4	-5,413.1	-174.4	5,415.2	0.01	0.01	0.00	
16,800.0	90.07	179.83	10,898.3	-5,513.1	-174.1	5,515.2	0.01	0.01	0.00	
16,900.0	90.07	179.83	10,898.1	-5,613.1	-173.8	5,615.2	0.01	0.01	0.00	
17,000.0	90.08	179.83	10,898.0	-5,713.1	-173.5	5,715.2	0.01	0.01	0.00	
17,100.0	90.09	179.83	10,897.9	-5,813.1	-173.2	5,815.1	0.01	0.01	0.00	
17,200.0	90.10	179.83	10,897.7	-5,913.1	-172.9	5,915.1	0.01	0.01	0.00	
17,300.0	90.11	179.84	10,897.5	-6,013.1	-172.6	6,015.1	0.01	0.01	0.00	
17,400.0	90.11	179.84	10,897.3	-6,113.1	-172.3	6,115.1	0.01	0.01	0.00	
17,500.0	90.12	179.84	10,897.1	-6,213.1	-172.0	6,215.1	0.01	0.01	0.00	
17,600.0	90.13	179.84	10,896.9	-6,313.1	-171.8	6,315.1	0.01	0.01	0.00	
17,700.0	90.14	179.84	10,896.7	-6,413.1	-171.5	6,415.0	0.01	0.01	0.00	
17,800.0	90.14	179.84	10,896.4	-6,513.1	-171.2	6,515.0	0.01	0.01	0.00	
17,900.0	90.15	179.84	10,896.2	-6,613.1	-170.9	6,615.0	0.01	0.01	0.00	
18,000.0	90.16	179.84	10,895.9	-6,713.1	-170.6	6,715.0	0.01	0.01	0.00	

EOG Resources

Planning Report



Database:	EDM 5000.14	Local Co-ordinate Reference	Well #503H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3523.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3523.0usft
Site:	Ruthless 11 Fed Com	North Reference:	Grid
Well:	#503H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,100.0	90.17	179.84	10,895.6	-6,813.1	-170.3	6,815.0	0.01	0.01	0.00
18,200.0	90.18	179.84	10,895.3	-6,913.1	-170.1	6,914.9	0.01	0.01	0.00
18,300.0	90.18	179.84	10,895.0	-7,013.1	-169.8	7,014.9	0.01	0.01	0.00
18,400.0	90.19	179.84	10,894.7	-7,113.1	-169.5	7,114.9	0.01	0.01	0.00
18,500.0	90.20	179.84	10,894.3	-7,213.1	-169.2	7,214.9	0.01	0.01	0.00
18,587.9	90.21	179.84	10,894.0	-7,301.0	-169.0	7,302.8	0.01	0.01	0.00
Fed PP2(Ruthless 11 FC #503H)									
18,600.0	90.20	179.84	10,894.0	-7,313.1	-169.0	7,314.9	0.02	-0.02	0.00
18,700.0	90.19	179.84	10,893.6	-7,413.1	-168.7	7,414.8	0.02	-0.02	0.00
18,800.0	90.17	179.84	10,893.3	-7,513.1	-168.4	7,514.8	0.02	-0.02	0.00
18,900.0	90.16	179.84	10,893.0	-7,613.1	-168.1	7,614.8	0.02	-0.02	0.00
19,000.0	90.14	179.84	10,892.8	-7,713.1	-167.8	7,714.8	0.02	-0.02	0.00
19,100.0	90.12	179.83	10,892.5	-7,813.1	-167.6	7,814.8	0.02	-0.02	0.00
19,200.0	90.11	179.83	10,892.3	-7,913.1	-167.3	7,914.8	0.02	-0.02	0.00
19,300.0	90.09	179.83	10,892.2	-8,013.1	-167.0	8,014.7	0.02	-0.02	0.00
19,400.0	90.07	179.83	10,892.0	-8,113.1	-166.7	8,114.7	0.02	-0.02	0.00
19,500.0	90.06	179.83	10,891.9	-8,213.1	-166.4	8,214.7	0.02	-0.02	0.00
19,600.0	90.04	179.82	10,891.8	-8,313.1	-166.1	8,314.7	0.02	-0.02	0.00
19,700.0	90.03	179.82	10,891.7	-8,413.1	-165.8	8,414.7	0.02	-0.02	0.00
19,800.0	90.01	179.82	10,891.7	-8,513.1	-165.5	8,514.6	0.02	-0.02	0.00
19,900.0	89.99	179.82	10,891.7	-8,613.1	-165.1	8,614.6	0.02	-0.02	0.00
20,000.0	89.98	179.82	10,891.7	-8,713.1	-164.8	8,714.6	0.02	-0.02	0.00
20,100.0	89.96	179.82	10,891.8	-8,813.1	-164.5	8,814.6	0.02	-0.02	0.00
20,200.0	89.94	179.81	10,891.9	-8,913.1	-164.2	8,914.6	0.02	-0.02	0.00
20,300.0	89.93	179.81	10,892.0	-9,013.1	-163.8	9,014.5	0.02	-0.02	0.00
20,400.0	89.91	179.81	10,892.1	-9,113.1	-163.5	9,114.5	0.02	-0.02	0.00
20,500.0	89.90	179.81	10,892.3	-9,213.1	-163.2	9,214.5	0.02	-0.02	0.00
20,600.0	89.88	179.81	10,892.5	-9,313.1	-162.8	9,314.5	0.02	-0.02	0.00
20,700.0	89.86	179.80	10,892.7	-9,413.1	-162.5	9,414.5	0.02	-0.02	0.00
20,800.0	89.85	179.80	10,893.0	-9,513.1	-162.2	9,514.4	0.02	-0.02	0.00
20,900.0	89.83	179.80	10,893.2	-9,613.1	-161.8	9,614.4	0.02	-0.02	0.00
21,000.0	89.81	179.80	10,893.6	-9,713.1	-161.5	9,714.4	0.02	-0.02	0.00
21,100.0	89.80	179.80	10,893.9	-9,813.1	-161.1	9,814.4	0.02	-0.02	0.00
21,130.9	89.79	179.80	10,894.0	-9,844.0	-161.0	9,845.3	0.02	-0.02	0.00
PBHL(Ruthless 11 FC #503H)									

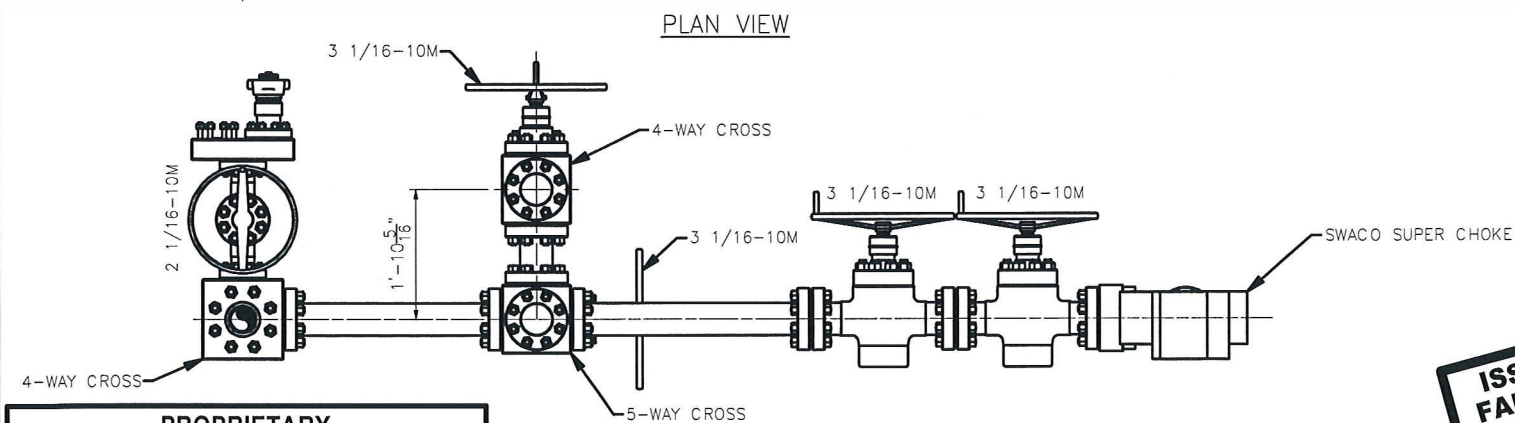
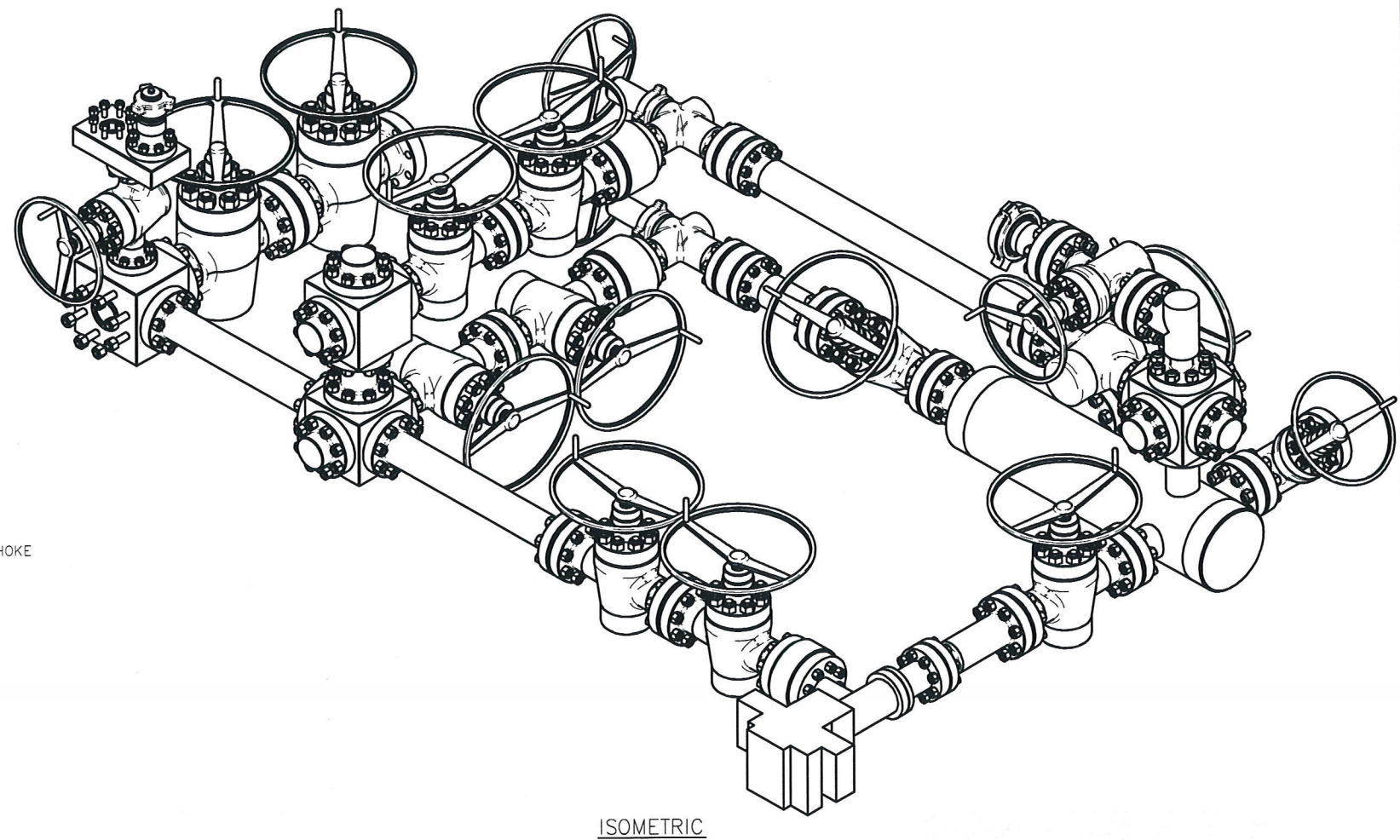
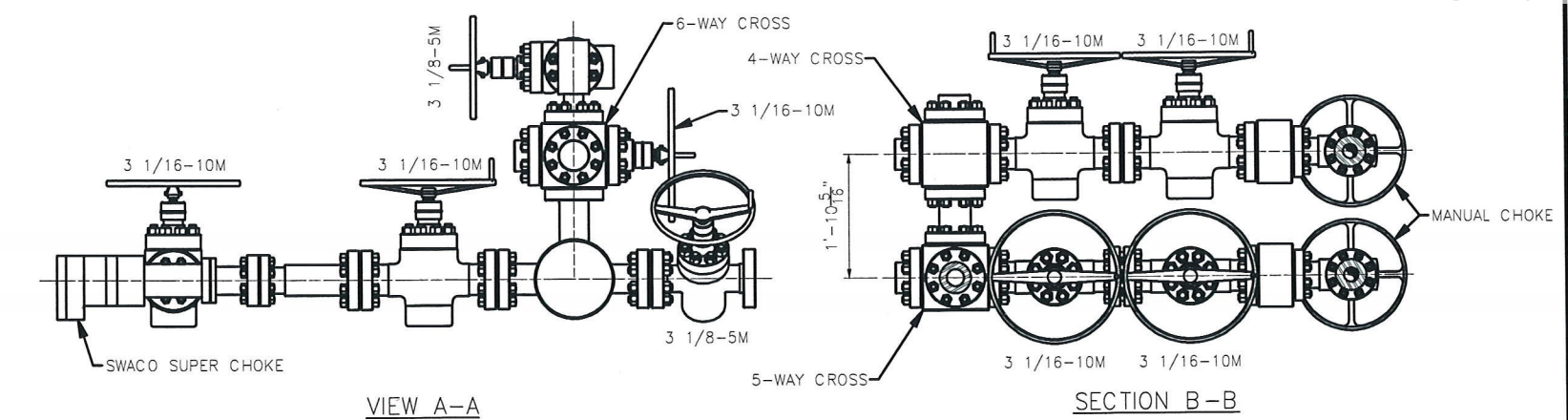
EOG Resources

Planning Report



Database:	EDM 5000.14	Local Co-ordinate Reference	Well #503H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3523.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3523.0usft
Site:	Ruthless 11 Fed Com	North Reference:	Grid
Well:	#503H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
KOP(Ruthless 11 FC #5i - plan hits target center - Point	0.00	0.00	10,416.5	572.0	-193.0	419,760.00	752,755.00	32° 9' 7.757 N	103° 39' 0.690 W
FTP(Ruthless 11 FC #5C - plan hits target center - Point	0.00	0.00	10,629.2	520.0	-193.0	419,708.00	752,755.00	32° 9' 7.243 N	103° 39' 0.694 W
PBHL(Ruthless 11 FC #i - plan hits target center - Point	0.00	0.00	10,894.0	-9,844.0	-161.0	409,344.00	752,787.00	32° 7' 24.684 N	103° 39' 1.086 W
Fed PP(Ruthless 11 FC - plan hits target center - Point	0.00	0.00	10,894.0	-2,018.0	-185.0	417,170.00	752,763.00	32° 8' 42.127 N	103° 39' 0.788 W
Fed PP2(Ruthless 11 FC - plan hits target center - Point	0.00	0.00	10,894.0	-7,301.0	-169.0	411,887.00	752,779.00	32° 7' 49.849 N	103° 39' 0.992 W



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WRITTEN CONSENT OF A DULY AUTHORIZED OFFICER
OF HELMERICH & PAYNE INT'L DRILLING CO.

ISSUED FOR FABRICATION
February-10-2014
DRAFTSMAN *MWL*
ENGINEER *BSC*

STANDARD TOLERANCES (UNLESS NOTED)			
1. FABRICATION DIMENSIONS:		A-0° TO 24° B-24° TO 120° C-OVER 120°	± 1/16" ± 1/8" ± 1/4"
2. MACHINED DIMENSIONS:		A-ANGULAR B-LINEAR (EXPRESSED AS FRACTION) LINEAR (EXPRESSED TO ONE DECIMAL) LINEAR (EXPRESSED TO TWO DECIMALS) LINEAR (EXPRESSED TO THREE DECIMALS)	± .30" ± .015 ± .1 ± .015 ± .005
-			
REV	DATE	DESCRIPTION	BY



HELMERICH & PAYNE

INTERNATIONAL DRILLING CO.

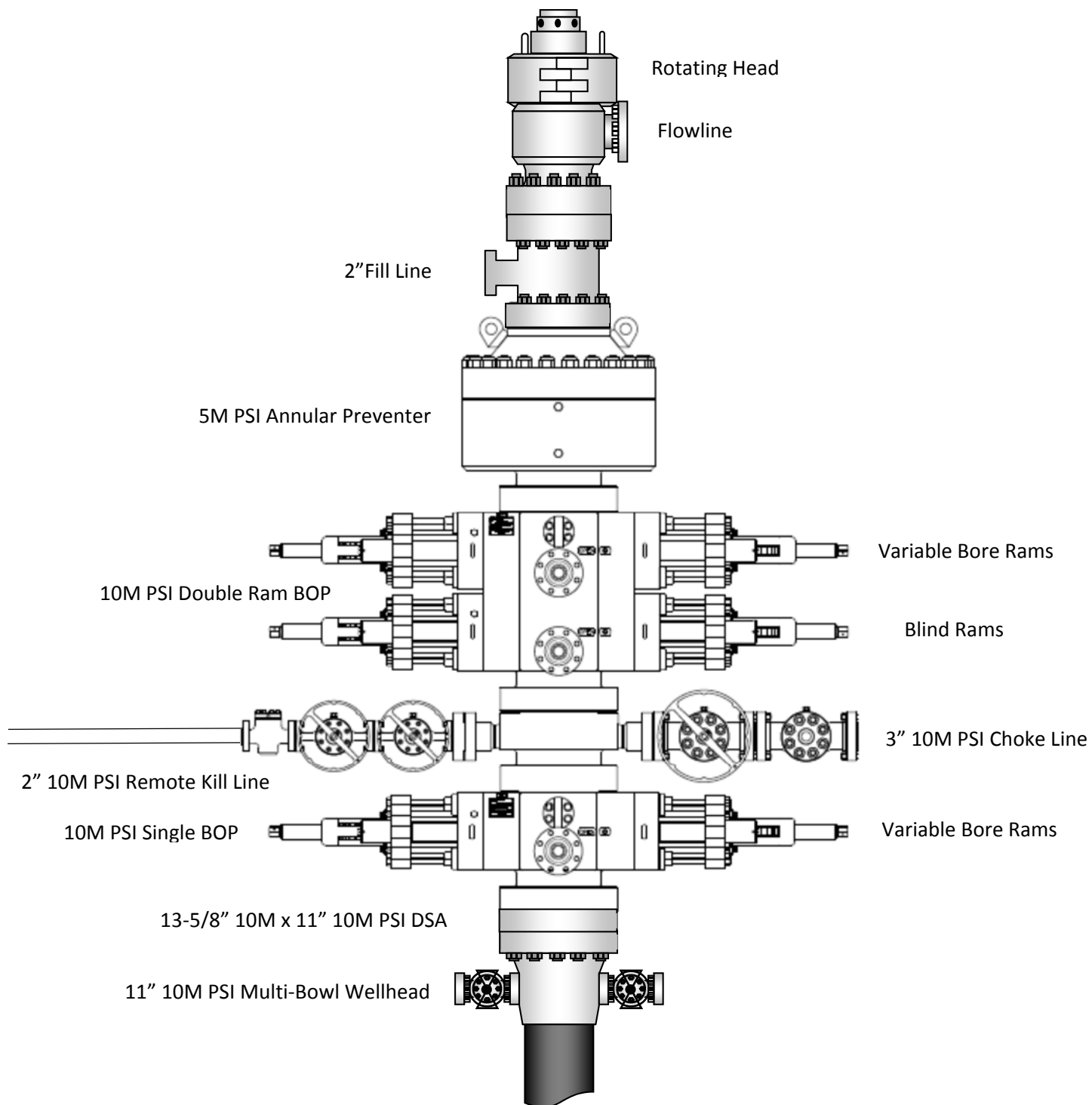
TITLE: 3 CHOKE, 3 LEVEL, 10M
CHOKE MANIFOLD G.A.

CUSTOMER: H&P

PROJECT:

DRAWN: MWL	DATE: 2/10/2014	DWG. NO.: HP-D1254	REV: —
SCALE: 3/4"=1'-0"	SHEET: 1 OF 1		

Exhibit 1
EOG Resources
11" 10M PSI BOP Stack



Hose Inspection Report

ContiTech Oil & Marine

Customer	Customer Reference #	CBC Reference #	CBC Inspector	Date of Inspection
H&P Drilling	740021604	COM906112	A. Jaimes	10/17/2016

Hose Manufacturer	Contitech Rubber Industrial
-------------------	-----------------------------

Hose Serial #	62429	Date of Manufacture	05/2012
Hose I.D.	3"	Working Pressure	10000PSI
Hose Type	Choke and Kill	Test Pressure	15000PSI
Manufacturing Standard	API 16C		

Connections

End A: 3.1/16" 10Kpsi API Spec 6A Type 6BX Flange	End B: 3.1/16" 10Kpsi API Spec 6A Type 6BX Flange
• No damage	• No damage
Material: Carbon Steel	Material: Carbon Steel
Seal Face: BX154	Seal Face: BX154
Length Before Hydro Test: 16'	Length After Hydro test: 16'

Conclusion: Hose #62429 passed the external inspection with no notable damages to the hose armor. Internal borescope of the hose showed no damage to the hose liner. Hose #62429 passed the hydrostatic pressure test by holding a pressure of 15,000PSI for 60 minutes. Hose #62429 is suitable for continued service.

Recommendations: In general the hose should be inspected on a regular on-going basis. The frequency and degree of the inspection should as a minimum follow these guidelines:

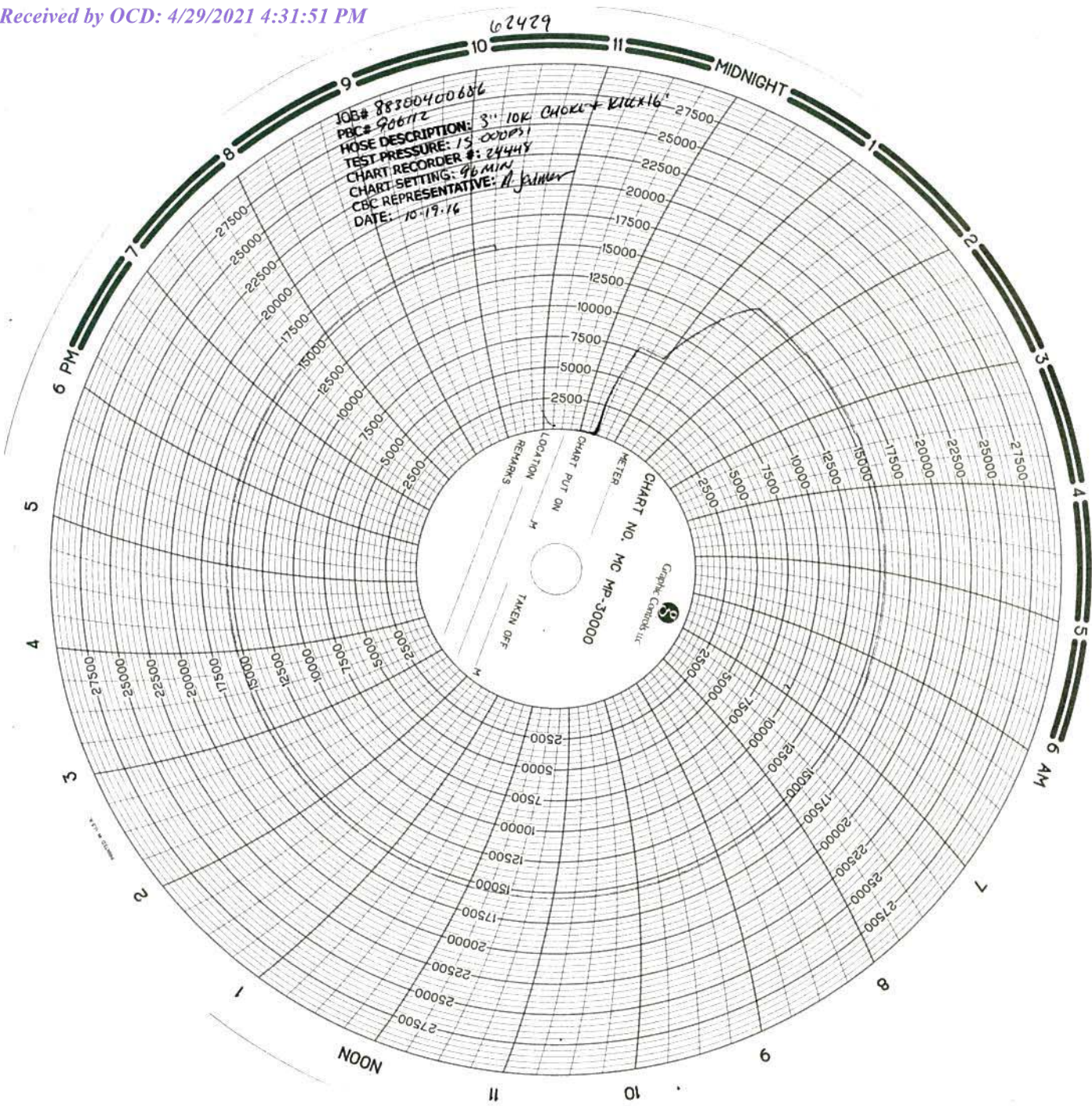
Visual inspection: Every 3 months (or during installation/removal)
 Annual: In-situ pressure test
 Initial 5 years service: Major inspection
 2nd Major inspection: 8 / 10 years of service
 (Detailed description of test regime available upon request, ISS-059 Rev 04)

****NOTE:** There are a number of critical elements in the hose that cannot be thoroughly checked through standard inspection techniques. Away from dissecting the hose body, the best way to evaluate the condition of the hose is through review of the operating conditions recorded during the hose service life, in particular maximums and peak conditions.

Issued By: Alejandro Jaimes
 Date: 10/25/2016

Checked By: Jeremy Mckay
 Date: 10/25/2016
 QF97

Page 1 of 1



10,000 PSI BOP Annular Variance Request

EOG Resources request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOP).

1. Component and Preventer Compatibility Tables

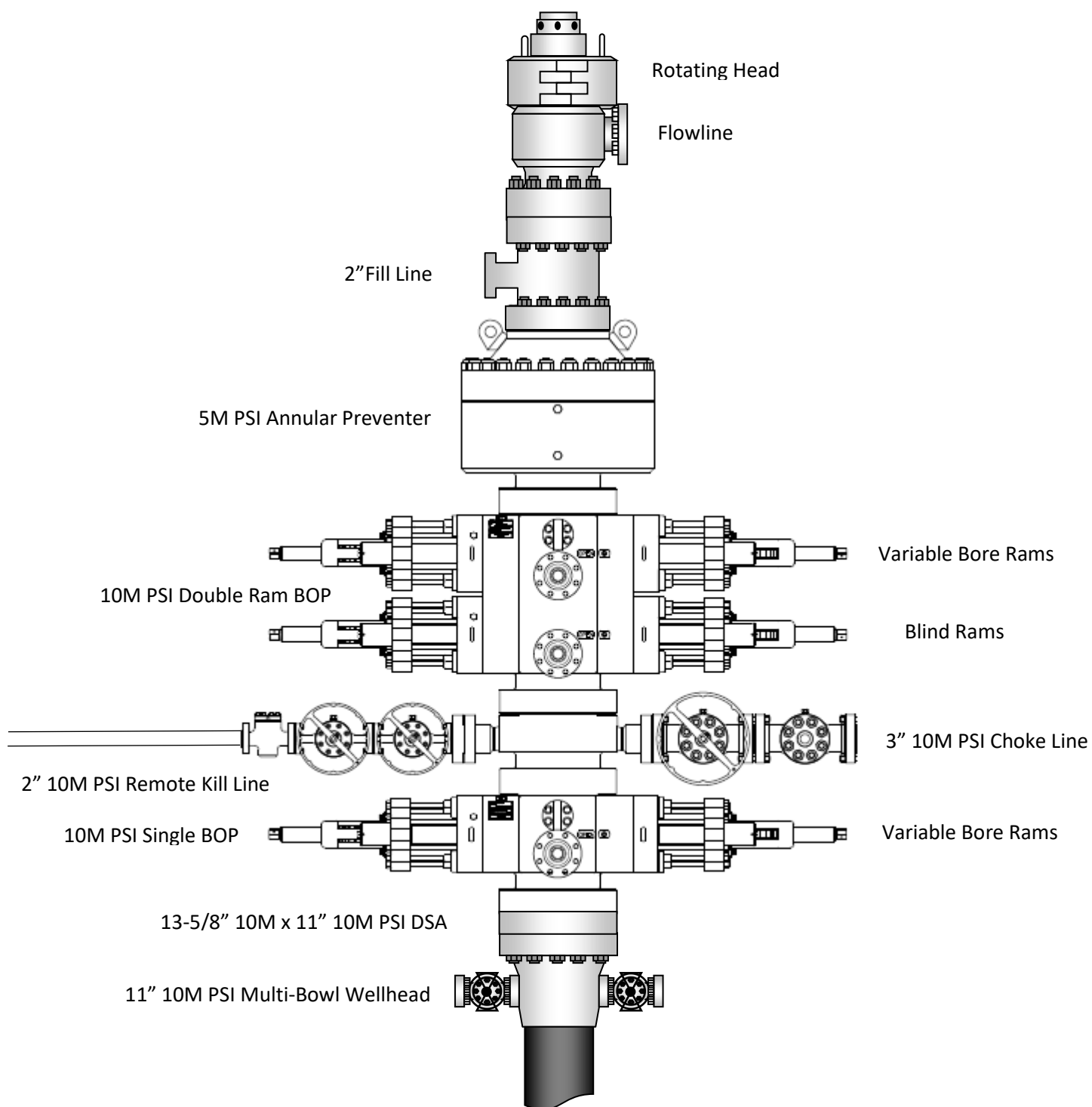
The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

9-7/8" & 8-3/4" Intermediate Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
DCs and MWD tools	6.500 – 8.000"	Annular	5M	-	-
Mud Motor	6.750 – 8.000"	Annular	5M	-	-
Intermediate casing	7.625"	Annular	5M	-	-
Open-hole	-	Blind Rams	10M	-	-

6-3/4" Production Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
DCs and MWD tools	4.750 – 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Mud Motor	4.750 – 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Mud Motor	5.500 – 5.750"	Annular	5M	-	-
Production casing	5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Open-hole	-	Blind Rams	10M	-	-

VBR = Variable Bore Ram

EOG Resources 11" 10M PSI BOP Stack



2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the EOG Resources drilling supervisor's office on location, and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 100% of its RWP.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out drill string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full opening safety valve and close
3. Space out string

4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

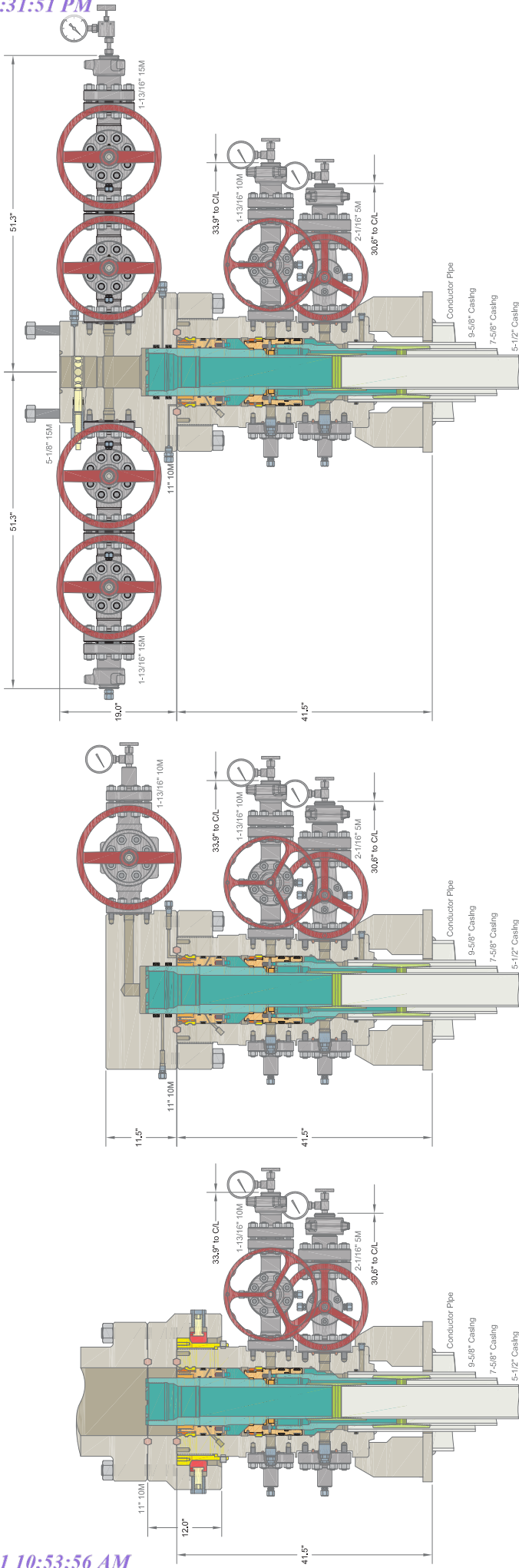
General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams. (HCR and choke will already be in the closed position.)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA thru Stack

1. PRIOR to pulling last joint of drillpipe thru the stack.
 - a. Perform flowcheck, if flowing:
 - b. Sound alarm (alert crew)
 - c. Stab full opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper variable bore rams.
 - e. Shut-in using upper variable bore rams. (HCR and choke will already be in the closed position.)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full opening safety valve and close
 - c. Space out drill string with upset just beneath the upper variable bore rams.
 - d. Shut-in using upper variable bore rams. (HCR and choke will already be in the closed position.)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP and SICP

- ii. Pit gain
 - iii. Time
 - h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. If possible to pick up high enough, pull string clear of the stack and follow “Open Hole” scenario.
 - c. If impossible to pick up high enough to pull the string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper variable bore ram.
 - f. Shut-in using upper variable bore ram. (HCR and choke will already be in the closed position.)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan



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CACTUS WELLHEAD LLC		EOG RESOURCES DELAWARE	
20" x 9-5/8" x 7-5/8" x 5-1/2" MBU-T-SF SOW Wellhead System With 11" 10M x 5-1/8" 15M CMT-DBLHPS-SB Tubing Head, Mandrel Hangers, Quick Connect Drilling Adapter And TA Cap		DRAWN	DLE
		APPRV	
		DRAWING NO. HBE00000010	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 26392

COMMENTS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 26392
	Action Type: [C-103] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
jagarcia	Accepted for record	6/25/2021

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 26392

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 26392
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
jagarcia	None	6/25/2021