

30-025-43897

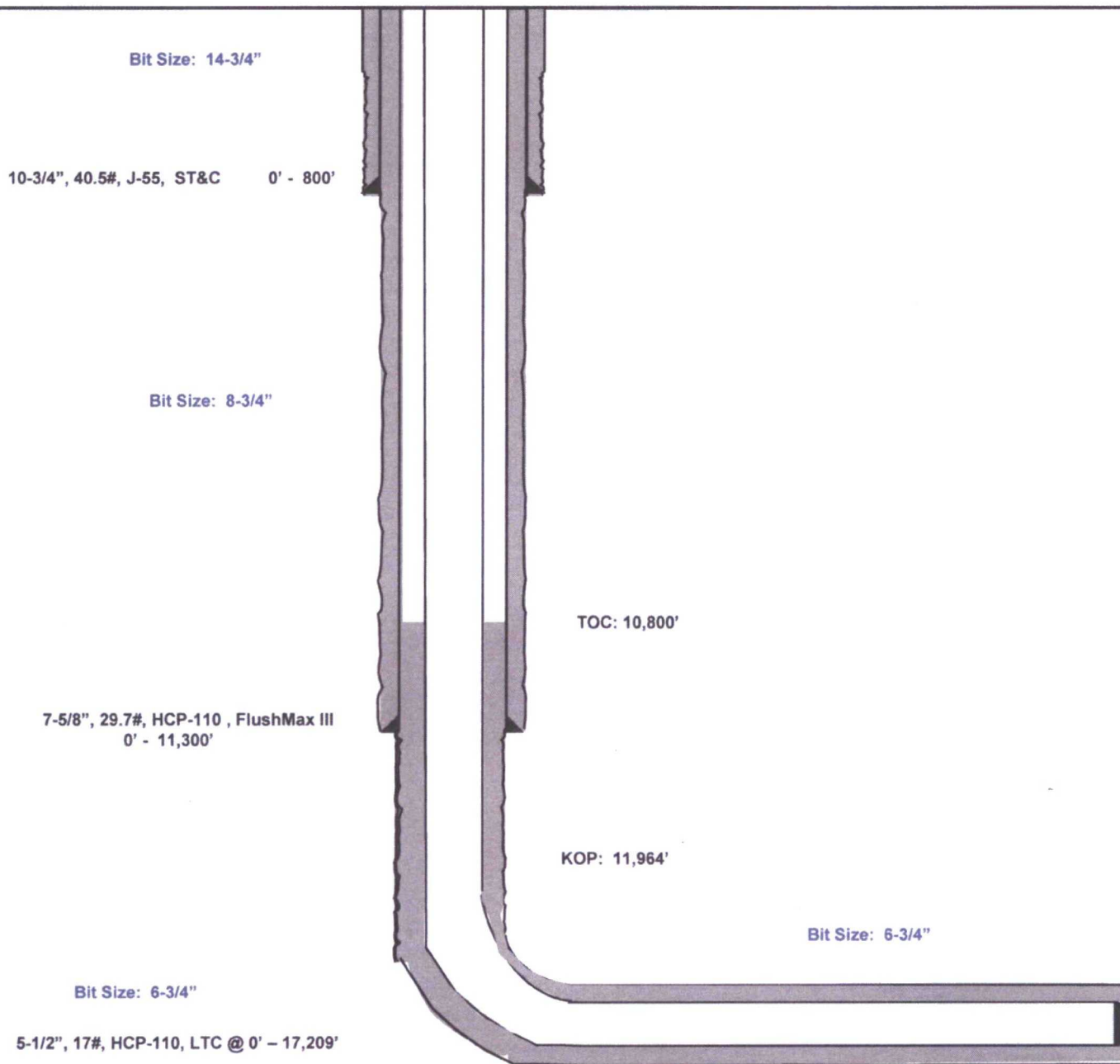
Thor 21 #709H

Lea County, New Mexico
Proposed Wellbore

175' FSL
439' FEL
Section 21
T-26-S, R-33-E

API: 30-025-*****

KB: 3,278'
GL: 3,253'



Lateral: 17,209' MD, 12,405' TVD

BH Location: 230' FNL & 1270' FEL
Section 21
T-26-S, R-33-E



Lea County, NM (NAD 83 NME)

Thor 21 #709H

Plan #0.1

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: #709H

KB = 25' @ 3278.0m
Northing 372646.00 Easting 777866.00 Latitude 32° 1' 19.875 N Longitude 103° 34' 12.486 W

SECTION DETAILS

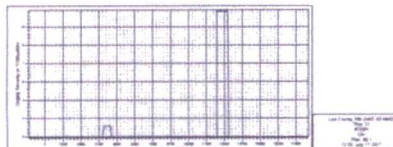
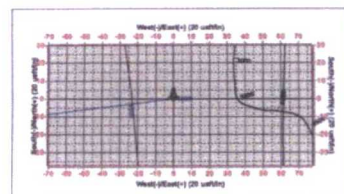
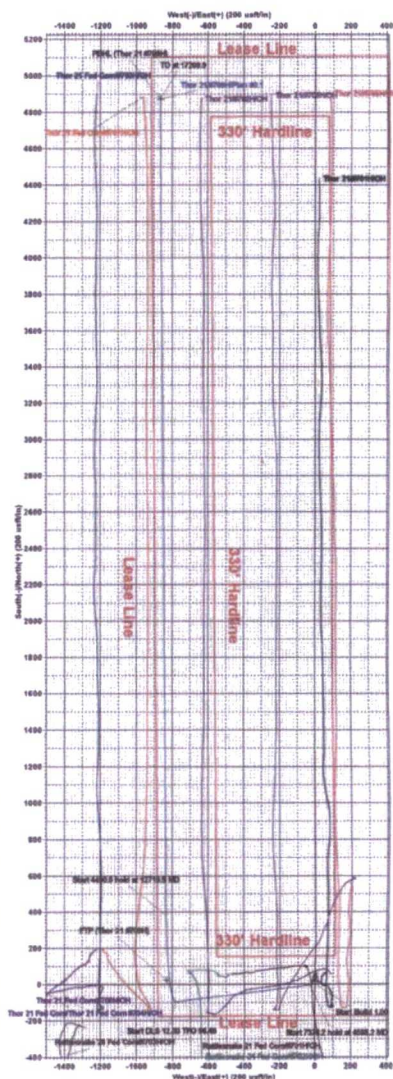
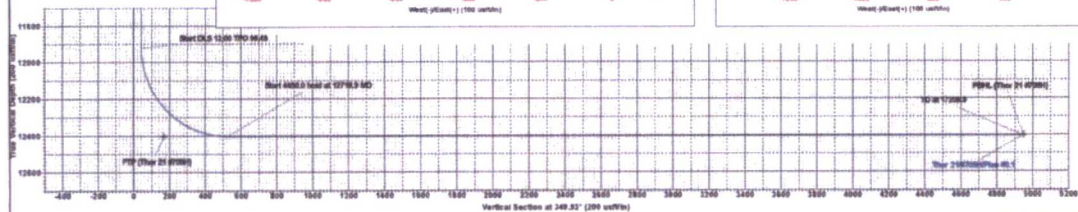
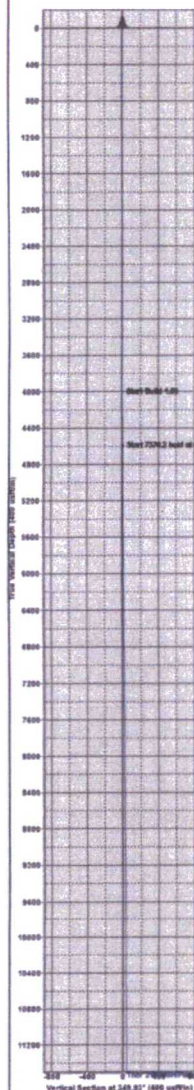
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Clog	TFace	VSec	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0		
3	4000.2	0.00	263.06	4007.1	-3.8	-39.9	1.00	263.06	1.9		
4	11964.3	0.00	263.06	11924.5	-85.0	-780.3	0.00	0.00	42.9		
5	12719.9	90.00	359.59	12405.0	382.1	-832.9	12.00	96.48	521.8		
6	17269.9	90.00	359.59	12405.0	4872.0	-865.0	0.00	0.00	4942.2		PBHL (Thor 21 #709H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
PBHL (Thor 21 #709H)	12405.0	4872.0	-865.0	377916.00	777001.00
FTP (Thor 21 #709H)	12405.0	23.0	-830.0	372646.00	777036.00





EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Thor 21

#709H

OH

Plan: Plan #0.1

Standard Planning Report

17 July, 2017



EOG Resources, Inc.
Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #709H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25' @ 3278.0usft
MD Reference: KB = 25' @ 3278.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	Thor 21		
Site Position:	From: Map	Northing:	372,646.00 usft
		Easting:	777,866.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 19.875 N
		Longitude:	103° 34' 12.486 W
		Grid Convergence:	0.40 °

Well	#709H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level:
			3,253.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	7/17/2017	6.93
			Dip Angle
			59.88
			Field Strength
			47,811.00403003

Design	Plan #0.1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			349.93

Plan Survey Tool Program	Date 7/17/2017		
Depth From	Depth To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
1	0.0	17,209.6 Plan #0.1 (OH)	MWD
			MWD - Standard

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,588.2	5.88	263.06	4,587.1	-3.6	-29.9	1.00	1.00	0.00	263.06	
11,964.3	5.88	263.06	11,924.5	-95.0	-780.3	0.00	0.00	0.00	0.00	
12,719.9	90.00	359.59	12,405.0	382.1	-832.9	12.00	11.13	12.78	96.49	
17,209.9	90.00	359.59	12,405.0	4,872.0	-865.0	0.00	0.00	0.00	0.00	PBHL (Thor 21 #709H)



EOG Resources, Inc.

Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #709H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25' @ 3278.0usft
MD Reference: KB = 25' @ 3278.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	1.00	263.06	4,100.0	-0.1	-0.9	0.0	1.00	1.00	0.00
4,200.0	2.00	263.06	4,200.0	-0.4	-3.5	0.2	1.00	1.00	0.00
4,300.0	3.00	263.06	4,299.9	-0.9	-7.8	0.4	1.00	1.00	0.00
4,400.0	4.00	263.06	4,399.7	-1.7	-13.9	0.8	1.00	1.00	0.00
4,500.0	5.00	263.06	4,499.4	-2.6	-21.6	1.2	1.00	1.00	0.00
4,588.2	5.88	263.06	4,587.1	-3.6	-29.9	1.6	1.00	1.00	0.00
4,600.0	5.88	263.06	4,598.9	-3.8	-31.1	1.7	0.00	0.00	0.00
4,700.0	5.88	263.06	4,698.4	-5.0	-41.3	2.3	0.00	0.00	0.00
4,800.0	5.88	263.06	4,797.9	-6.3	-51.5	2.8	0.00	0.00	0.00
4,900.0	5.88	263.06	4,897.3	-7.5	-61.7	3.4	0.00	0.00	0.00
5,000.0	5.88	263.06	4,996.8	-8.7	-71.8	4.0	0.00	0.00	0.00
5,100.0	5.88	263.06	5,096.3	-10.0	-82.0	4.5	0.00	0.00	0.00
5,200.0	5.88	263.06	5,195.7	-11.2	-92.2	5.1	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #709H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well #709H
KB = 25' @ 3278.0usft
KB = 25' @ 3278.0usft
Grid
Minimum Curvature

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	5.88	263.06	5,295.2	-12.5	-102.4	5.6	0.00	0.00	0.00
5,400.0	5.88	263.06	5,394.7	-13.7	-112.5	6.2	0.00	0.00	0.00
5,500.0	5.88	263.06	5,494.2	-14.9	-122.7	6.7	0.00	0.00	0.00
5,600.0	5.88	263.06	5,593.6	-16.2	-132.9	7.3	0.00	0.00	0.00
5,700.0	5.88	263.06	5,693.1	-17.4	-143.0	7.9	0.00	0.00	0.00
5,800.0	5.88	263.06	5,792.6	-18.6	-153.2	8.4	0.00	0.00	0.00
5,900.0	5.88	263.06	5,892.1	-19.9	-163.4	9.0	0.00	0.00	0.00
6,000.0	5.88	263.06	5,991.5	-21.1	-173.6	9.5	0.00	0.00	0.00
6,100.0	5.88	263.06	6,091.0	-22.4	-183.7	10.1	0.00	0.00	0.00
6,200.0	5.88	263.06	6,190.5	-23.6	-193.9	10.7	0.00	0.00	0.00
6,300.0	5.88	263.06	6,290.0	-24.8	-204.1	11.2	0.00	0.00	0.00
6,400.0	5.88	263.06	6,389.4	-26.1	-214.2	11.8	0.00	0.00	0.00
6,500.0	5.88	263.06	6,488.9	-27.3	-224.4	12.3	0.00	0.00	0.00
6,600.0	5.88	263.06	6,588.4	-28.5	-234.6	12.9	0.00	0.00	0.00
6,700.0	5.88	263.06	6,687.8	-29.8	-244.8	13.5	0.00	0.00	0.00
6,800.0	5.88	263.06	6,787.3	-31.0	-254.9	14.0	0.00	0.00	0.00
6,900.0	5.88	263.06	6,886.8	-32.3	-265.1	14.6	0.00	0.00	0.00
7,000.0	5.88	263.06	6,986.3	-33.5	-275.3	15.1	0.00	0.00	0.00
7,100.0	5.88	263.06	7,085.7	-34.7	-285.5	15.7	0.00	0.00	0.00
7,200.0	5.88	263.06	7,185.2	-36.0	-295.6	16.3	0.00	0.00	0.00
7,300.0	5.88	263.06	7,284.7	-37.2	-305.8	16.8	0.00	0.00	0.00
7,400.0	5.88	263.06	7,384.2	-38.5	-316.0	17.4	0.00	0.00	0.00
7,500.0	5.88	263.06	7,483.6	-39.7	-326.1	17.9	0.00	0.00	0.00
7,600.0	5.88	263.06	7,583.1	-40.9	-336.3	18.5	0.00	0.00	0.00
7,700.0	5.88	263.06	7,682.6	-42.2	-346.5	19.1	0.00	0.00	0.00
7,800.0	5.88	263.06	7,782.1	-43.4	-356.7	19.6	0.00	0.00	0.00
7,900.0	5.88	263.06	7,881.5	-44.6	-366.8	20.2	0.00	0.00	0.00
8,000.0	5.88	263.06	7,981.0	-45.9	-377.0	20.7	0.00	0.00	0.00
8,100.0	5.88	263.06	8,080.5	-47.1	-387.2	21.3	0.00	0.00	0.00
8,200.0	5.88	263.06	8,180.0	-48.4	-397.4	21.9	0.00	0.00	0.00
8,300.0	5.88	263.06	8,279.4	-49.6	-407.5	22.4	0.00	0.00	0.00
8,400.0	5.88	263.06	8,378.9	-50.8	-417.7	23.0	0.00	0.00	0.00
8,500.0	5.88	263.06	8,478.4	-52.1	-427.9	23.5	0.00	0.00	0.00
8,600.0	5.88	263.06	8,577.8	-53.3	-438.0	24.1	0.00	0.00	0.00
8,700.0	5.88	263.06	8,677.3	-54.5	-448.2	24.6	0.00	0.00	0.00
8,800.0	5.88	263.06	8,776.8	-55.8	-458.4	25.2	0.00	0.00	0.00
8,900.0	5.88	263.06	8,876.3	-57.0	-468.6	25.8	0.00	0.00	0.00
9,000.0	5.88	263.06	8,975.7	-58.3	-478.7	26.3	0.00	0.00	0.00
9,100.0	5.88	263.06	9,075.2	-59.5	-488.9	26.9	0.00	0.00	0.00
9,200.0	5.88	263.06	9,174.7	-60.7	-499.1	27.4	0.00	0.00	0.00
9,300.0	5.88	263.06	9,274.2	-62.0	-509.2	28.0	0.00	0.00	0.00
9,400.0	5.88	263.06	9,373.6	-63.2	-519.4	28.6	0.00	0.00	0.00
9,500.0	5.88	263.06	9,473.1	-64.4	-529.6	29.1	0.00	0.00	0.00
9,600.0	5.88	263.06	9,572.6	-65.7	-539.8	29.7	0.00	0.00	0.00
9,700.0	5.88	263.06	9,672.1	-66.9	-549.9	30.2	0.00	0.00	0.00
9,800.0	5.88	263.06	9,771.5	-68.2	-560.1	30.8	0.00	0.00	0.00
9,900.0	5.88	263.06	9,871.0	-69.4	-570.3	31.4	0.00	0.00	0.00
10,000.0	5.88	263.06	9,970.5	-70.6	-580.5	31.9	0.00	0.00	0.00
10,100.0	5.88	263.06	10,070.0	-71.9	-590.6	32.5	0.00	0.00	0.00
10,200.0	5.88	263.06	10,169.4	-73.1	-600.8	33.0	0.00	0.00	0.00
10,300.0	5.88	263.06	10,268.9	-74.3	-611.0	33.6	0.00	0.00	0.00
10,400.0	5.88	263.06	10,368.4	-75.6	-621.1	34.2	0.00	0.00	0.00
10,500.0	5.88	263.06	10,467.8	-76.8	-631.3	34.7	0.00	0.00	0.00
10,600.0	5.88	263.06	10,567.3	-78.1	-641.5	35.3	0.00	0.00	0.00



EOG Resources, Inc.
Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #709H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25' @ 3278.0usft
MD Reference: KB = 25' @ 3278.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
10,700.0	5.88	263.06	10,666.8	-79.3	-651.7	35.8	0.00	0.00	0.00
10,800.0	5.88	263.06	10,766.3	-80.5	-661.8	36.4	0.00	0.00	0.00
10,900.0	5.88	263.06	10,865.7	-81.8	-672.0	37.0	0.00	0.00	0.00
11,000.0	5.88	263.06	10,965.2	-83.0	-682.2	37.5	0.00	0.00	0.00
11,100.0	5.88	263.06	11,064.7	-84.3	-692.4	38.1	0.00	0.00	0.00
11,200.0	5.88	263.06	11,164.2	-85.5	-702.5	38.6	0.00	0.00	0.00
11,300.0	5.88	263.06	11,263.6	-86.7	-712.7	39.2	0.00	0.00	0.00
11,400.0	5.88	263.06	11,363.1	-88.0	-722.9	39.8	0.00	0.00	0.00
11,500.0	5.88	263.06	11,462.6	-89.2	-733.0	40.3	0.00	0.00	0.00
11,600.0	5.88	263.06	11,562.1	-90.4	-743.2	40.9	0.00	0.00	0.00
11,700.0	5.88	263.06	11,661.5	-91.7	-753.4	41.4	0.00	0.00	0.00
11,800.0	5.88	263.06	11,761.0	-92.9	-763.6	42.0	0.00	0.00	0.00
11,900.0	5.88	263.06	11,860.5	-94.2	-773.7	42.6	0.00	0.00	0.00
11,964.3	5.88	263.06	11,924.5	-95.0	-780.3	42.9	0.00	0.00	0.00
11,975.0	5.88	275.60	11,935.1	-95.0	-781.4	43.1	12.00	-0.05	117.39
12,000.0	6.87	301.40	11,959.9	-94.1	-783.9	44.4	12.00	3.97	103.22
12,025.0	8.82	318.30	11,984.7	-91.9	-786.5	47.0	12.00	7.80	67.61
12,050.0	11.24	328.58	12,009.3	-88.3	-789.0	50.9	12.00	9.68	41.11
12,075.0	13.88	335.13	12,033.7	-83.5	-791.5	56.1	12.00	10.58	26.18
12,100.0	16.65	339.57	12,057.8	-77.5	-794.1	62.5	12.00	11.06	17.79
12,125.0	19.48	342.77	12,081.6	-70.1	-796.5	70.2	12.00	11.33	12.79
12,150.0	22.35	345.18	12,105.0	-61.5	-799.0	79.1	12.00	11.50	9.63
12,175.0	25.26	347.06	12,127.8	-51.8	-801.4	89.1	12.00	11.61	7.53
12,200.0	28.18	348.58	12,150.2	-40.8	-803.8	100.4	12.00	11.69	6.06
12,225.0	31.11	349.83	12,171.9	-28.6	-806.1	112.7	12.00	11.74	5.01
12,250.0	34.06	350.88	12,192.9	-15.3	-808.3	126.2	12.00	11.78	4.22
12,275.0	37.01	351.79	12,213.3	-1.0	-810.5	140.7	12.00	11.81	3.62
12,300.0	39.97	352.58	12,232.8	14.4	-812.6	156.3	12.00	11.84	3.16
12,325.0	42.94	353.27	12,251.6	30.9	-814.7	172.8	12.00	11.86	2.79
12,350.0	45.90	353.90	12,269.4	48.2	-816.6	190.3	12.00	11.87	2.50
12,375.0	48.88	354.46	12,286.4	66.5	-818.5	208.6	12.00	11.88	2.26
12,400.0	51.85	354.98	12,302.3	85.7	-820.2	227.8	12.00	11.89	2.06
12,411.8	53.26	355.21	12,309.5	95.1	-821.0	237.1	12.00	11.90	1.94
FTP (Thor 21 #709H)									
12,425.0	54.83	355.45	12,317.2	105.7	-821.9	247.7	12.00	11.90	1.87
12,450.0	57.80	355.89	12,331.1	126.4	-823.5	268.4	12.00	11.91	1.77
12,475.0	60.78	356.31	12,343.9	147.9	-824.9	289.8	12.00	11.92	1.65
12,500.0	63.76	356.70	12,355.5	170.0	-826.3	311.8	12.00	11.92	1.56
12,525.0	66.74	357.07	12,366.0	192.6	-827.5	334.3	12.00	11.92	1.48
12,550.0	69.72	357.42	12,375.2	215.8	-828.6	357.4	12.00	11.93	1.42
12,575.0	72.71	357.76	12,383.3	239.5	-829.6	380.8	12.00	11.93	1.36
12,600.0	75.69	358.09	12,390.1	263.5	-830.5	404.6	12.00	11.93	1.32
12,625.0	78.67	358.42	12,395.6	287.9	-831.2	428.7	12.00	11.93	1.29
12,650.0	81.66	358.73	12,399.9	312.5	-831.9	453.1	12.00	11.94	1.26
12,675.0	84.64	359.04	12,402.9	337.3	-832.3	477.6	12.00	11.94	1.24
12,700.0	87.63	359.35	12,404.6	362.2	-832.7	502.2	12.00	11.94	1.23
12,719.9	90.00	359.59	12,405.0	382.1	-832.9	521.8	12.00	11.94	1.22
12,800.0	90.00	359.59	12,405.0	462.2	-833.4	600.8	0.00	0.00	0.00
12,900.0	90.00	359.59	12,405.0	562.2	-834.2	699.4	0.00	0.00	0.00
13,000.0	90.00	359.59	12,405.0	662.2	-834.9	798.0	0.00	0.00	0.00
13,100.0	90.00	359.59	12,405.0	762.2	-835.6	896.6	0.00	0.00	0.00
13,200.0	90.00	359.59	12,405.0	862.2	-836.3	995.1	0.00	0.00	0.00
13,300.0	90.00	359.59	12,405.0	962.2	-837.0	1,093.7	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database: EDM 5000.14 Single User Db
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Thor 21
 Well: #709H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
 TVD Reference: KB = 25' @ 3278.0usft
 MD Reference: KB = 25' @ 3278.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
13,400.0	90.00	359.59	12,405.0	1,062.2	-837.7	1,192.3	0.00	0.00	0.00
13,500.0	90.00	359.59	12,405.0	1,162.2	-838.5	1,290.9	0.00	0.00	0.00
13,600.0	90.00	359.59	12,405.0	1,262.2	-839.2	1,389.5	0.00	0.00	0.00
13,700.0	90.00	359.59	12,405.0	1,362.2	-839.9	1,488.1	0.00	0.00	0.00
13,800.0	90.00	359.59	12,405.0	1,462.2	-840.6	1,586.6	0.00	0.00	0.00
13,900.0	90.00	359.59	12,405.0	1,562.2	-841.3	1,685.2	0.00	0.00	0.00
14,000.0	90.00	359.59	12,405.0	1,662.2	-842.0	1,783.8	0.00	0.00	0.00
14,100.0	90.00	359.59	12,405.0	1,762.2	-842.7	1,882.4	0.00	0.00	0.00
14,200.0	90.00	359.59	12,405.0	1,862.2	-843.5	1,981.0	0.00	0.00	0.00
14,300.0	90.00	359.59	12,405.0	1,962.2	-844.2	2,079.5	0.00	0.00	0.00
14,400.0	90.00	359.59	12,405.0	2,062.2	-844.9	2,178.1	0.00	0.00	0.00
14,500.0	90.00	359.59	12,405.0	2,162.2	-845.6	2,276.7	0.00	0.00	0.00
14,600.0	90.00	359.59	12,405.0	2,262.2	-846.3	2,375.3	0.00	0.00	0.00
14,700.0	90.00	359.59	12,405.0	2,362.2	-847.0	2,473.9	0.00	0.00	0.00
14,800.0	90.00	359.59	12,405.0	2,462.2	-847.8	2,572.5	0.00	0.00	0.00
14,900.0	90.00	359.59	12,405.0	2,562.2	-848.5	2,671.0	0.00	0.00	0.00
15,000.0	90.00	359.59	12,405.0	2,662.2	-849.2	2,769.6	0.00	0.00	0.00
15,100.0	90.00	359.59	12,405.0	2,762.2	-849.9	2,868.2	0.00	0.00	0.00
15,200.0	90.00	359.59	12,405.0	2,862.2	-850.6	2,966.8	0.00	0.00	0.00
15,300.0	90.00	359.59	12,405.0	2,962.2	-851.3	3,065.4	0.00	0.00	0.00
15,400.0	90.00	359.59	12,405.0	3,062.2	-852.0	3,164.0	0.00	0.00	0.00
15,500.0	90.00	359.59	12,405.0	3,162.2	-852.8	3,262.5	0.00	0.00	0.00
15,600.0	90.00	359.59	12,405.0	3,262.2	-853.5	3,361.1	0.00	0.00	0.00
15,700.0	90.00	359.59	12,405.0	3,362.2	-854.2	3,459.7	0.00	0.00	0.00
15,800.0	90.00	359.59	12,405.0	3,462.2	-854.9	3,558.3	0.00	0.00	0.00
15,900.0	90.00	359.59	12,405.0	3,562.1	-855.6	3,656.9	0.00	0.00	0.00
16,000.0	90.00	359.59	12,405.0	3,662.1	-856.3	3,755.5	0.00	0.00	0.00
16,100.0	90.00	359.59	12,405.0	3,762.1	-857.1	3,854.0	0.00	0.00	0.00
16,200.0	90.00	359.59	12,405.0	3,862.1	-857.8	3,952.6	0.00	0.00	0.00
16,300.0	90.00	359.59	12,405.0	3,962.1	-858.5	4,051.2	0.00	0.00	0.00
16,400.0	90.00	359.59	12,405.0	4,062.1	-859.2	4,149.8	0.00	0.00	0.00
16,500.0	90.00	359.59	12,405.0	4,162.1	-859.9	4,248.4	0.00	0.00	0.00
16,600.0	90.00	359.59	12,405.0	4,262.1	-860.6	4,347.0	0.00	0.00	0.00
16,700.0	90.00	359.59	12,405.0	4,362.1	-861.4	4,445.5	0.00	0.00	0.00
16,800.0	90.00	359.59	12,405.0	4,462.1	-862.1	4,544.1	0.00	0.00	0.00
16,900.0	90.00	359.59	12,405.0	4,562.1	-862.8	4,642.7	0.00	0.00	0.00
17,000.0	90.00	359.59	12,405.0	4,662.1	-863.5	4,741.3	0.00	0.00	0.00
17,100.0	90.00	359.59	12,405.0	4,762.1	-864.2	4,839.9	0.00	0.00	0.00
17,209.9	90.00	359.59	12,405.0	4,872.0	-865.0	4,948.2	0.00	0.00	0.00

PBHL (Thor 21 #709H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Thor 21 #709H)	0.00	0.00	12,405.0	23.0	-830.0	372,669.00	777,036.00	32° 1' 20.161 N	103° 34' 22.124 W
- hit/miss target									
- Shape									
- plan misses target center by 120.0usft at 12411.8usft MD (12309.5 TVD, 95.1 N, -821.0 E)									
- Point									
PBHL (Thor 21 #709H)	0.00	0.00	12,405.0	4,872.0	-865.0	377,518.00	777,001.00	32° 2' 8.146 N	103° 34' 22.134 W
- plan hits target center									
- Point									



EOG Resources, Inc.
Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #709H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25' @ 3278.0usft
MD Reference: KB = 25' @ 3278.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature