Revised Permit Information 12/3/14:

Well Name: Thor 21 No. 701H

Location:

SL: 230' FSL & 380' FEL, Section 21, T-26-S, R-33-E, Lea Co., N.M.
BHL: 230' FNL & 380' FEL, Section 21, T-26-S, R-33-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
12.25"	0 – 1000'	9.625"	40#	J55	STC	1.125	1.25	1.60
8.75"	0-11,500'	7"	26#	HCP-110	LTC	1.125	1.25	1.60
6.125"	0'-17,306'	4.5"	13.5#	HCP-110	BTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Slurry Description
1250'	300	13.5	1.73	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
11,500' DV Tool w/ ECP @ 4,850'	250	10.8	3.68	Stage 1 Lead: Class C + 15.00 lbs/sk BA-90 + 4.00% MPA-5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80% ASA-301 + 2.90% R-21 + 8.00 lb/sk LCM-1 + 0.005 lb/sx Static Free
	200	15.6	1.19	Stage 1 Tail: Class H + 1.0% FL-52 + 0.6% CD-32 + 0.5% SMS + 1.0% Salt + 0.3% R-3
	325	12.7	2.22	Stage 2 Lead: Class 'C' + 2.0% SMS + 10.0% Slat + 0.55% R-21 + 0.25 pps Celloflake + 0.005 pps Static Free (TOC @ Surface)
	150	14.8	1.35	Stage 2 Tail: Class 'C' + 0.60% FL-62 + 0.7% CD-32 + 0.3% SMS + 2.0% Salt + 0.10% R-3 + 0.005 pps Static Free + 0.005 gps FP-6L
17,306'	600	14.2	1.35	50:50:2 Class H + 0.65% FL-52 + 0.70% CD-32 + 1.0% EC-1 + 0.40% SMS + 2.0% Salt + 0.05% R-3 + 0.005 pps Static Free + 0.005 gps FP-6L (TOC @ 11,000')

Mud Program:

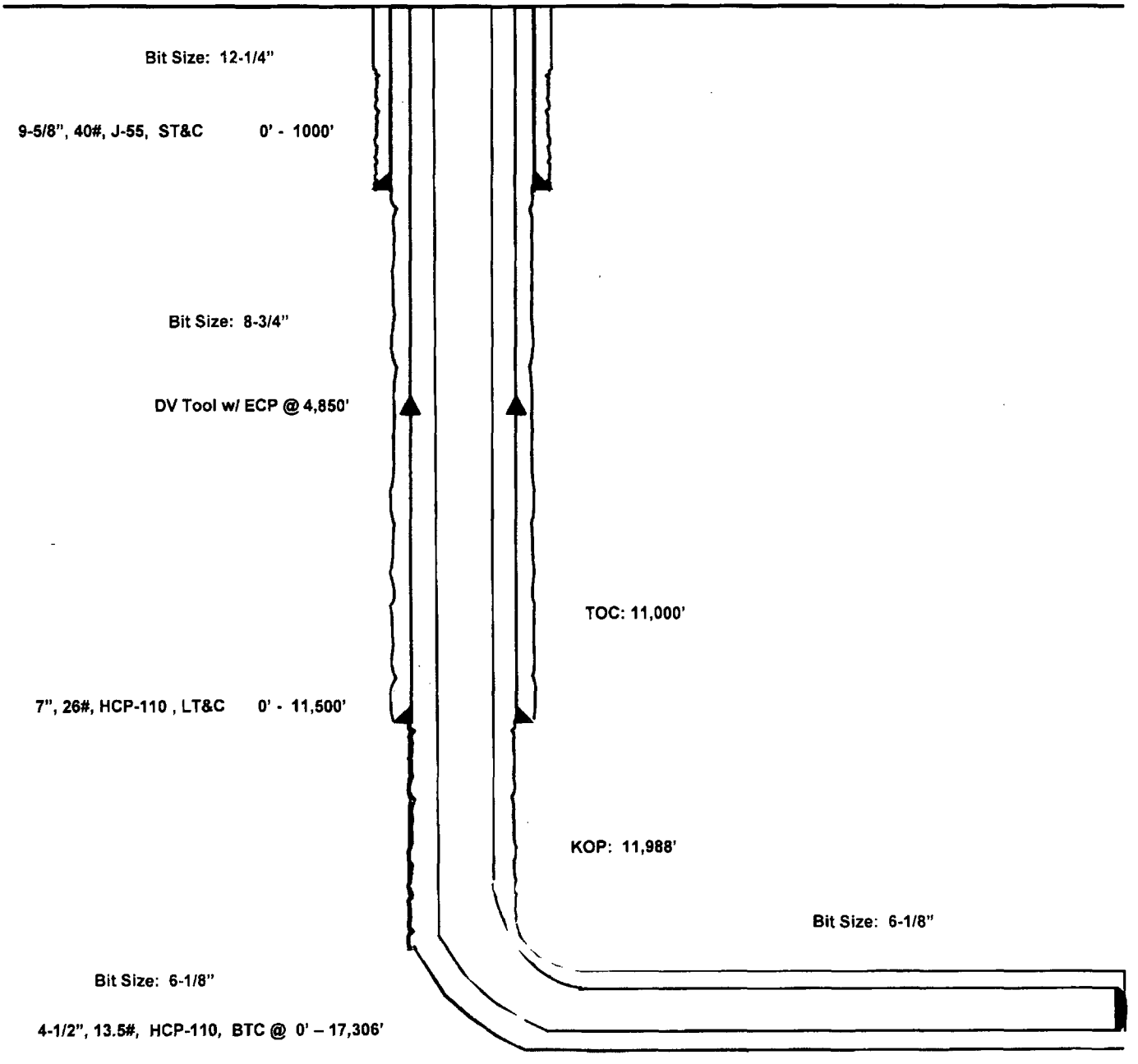
Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1000'	Fresh - Gel	8.6-8.8	28-34	N/c
1000' – 11,500'	Oil Base	8.7-9.4	58-68	N/c - 6
11,500' – 11,988'	Oil Base	8.7-9.4	58-68	N/c - 6
11,988' – 17,306' Lateral	Oil Base	9.0-9.5	58-68	N/c - 6

Thor 21 #701H

230' FSL
380' FEL
Section 21
T-26-S, R-33-E

Lea County, New Mexico
Proposed Wellbore
Revised 12/3/14
API: 30-025-41667

KB: 3,277'
GL: 3,252'



Lateral: 17,306' MD, 12,500' TVD

BH Location: 230' FNL & 380' FEL
Section 21
T-26-S, R-33-E

eog resources

Lea County, NM (NAD 27 NME)

Thor 21 #701H

H&P 260

Plan #1

PROJECT DETAILS: Lea County, NM (NAD 27 NME)	
Geodetic System:	*US State Plane 1927 (Exact solution)*
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	New Mexico East 3001
System Datum:	Mean Sea Level

Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.69°

Magnetic Field
Strength: 48107.4snT
Dip Angle: 59.90°
Date: 5/8/2015
Model: IGRF201014

To convert a Magnetic Direction to a Grid Direction, Add 6.69°
To convert a Magnetic Direction to a True Direction, Add 7.09° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

WELL DETAILS: #701H

Ground Level: 3252.0
KB = 25 @ 3277.0usft (H&P 260)

Northing	Easting	Latitude	Longitude
372644.00	736738.00	32° 1' 19.964 N	103° 34' 10.110 W

SECTION DETAILS

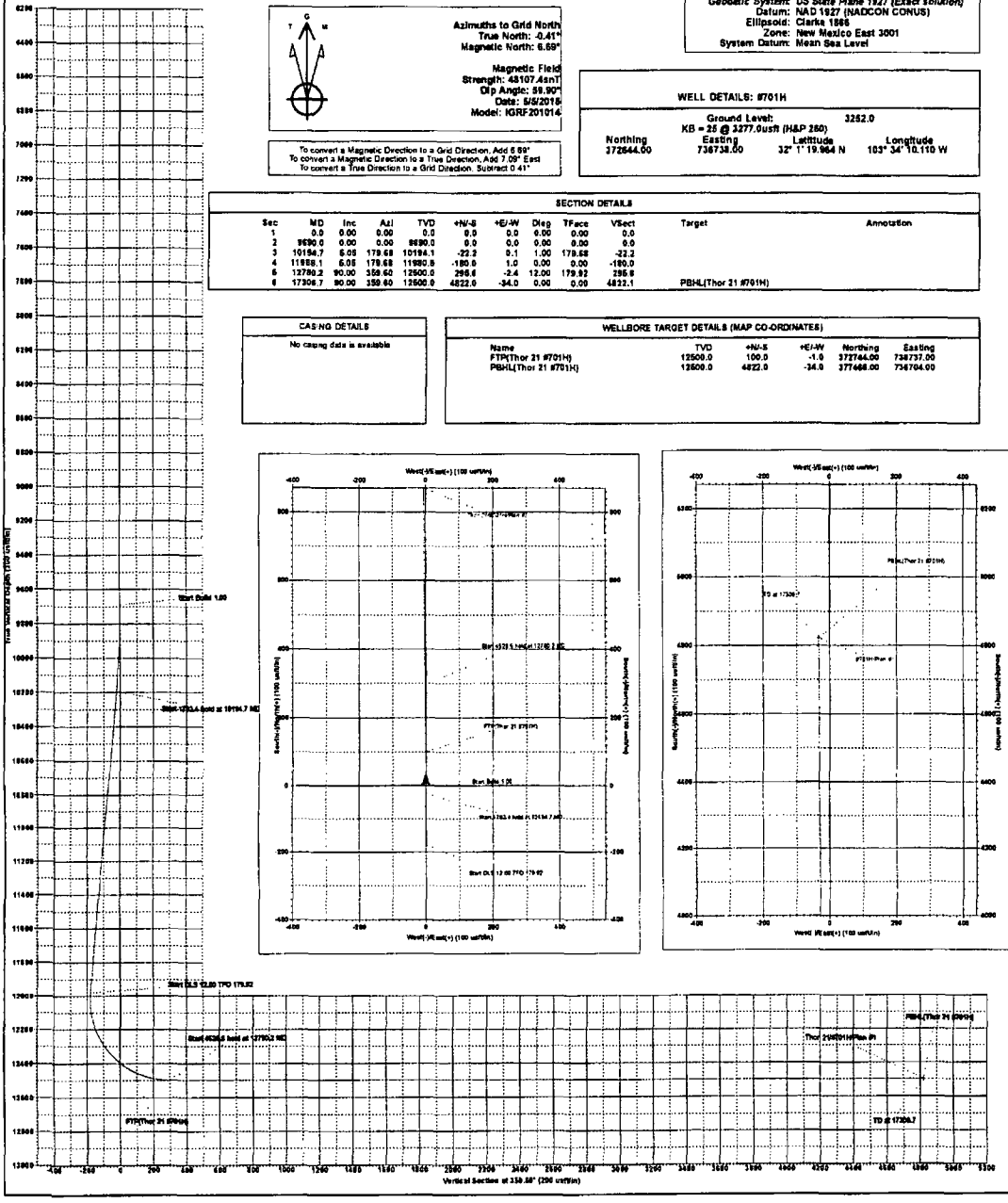
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	9630.0	0.00	0.00	9630.0	0.0	0.0	0.00	0.00	0.0		
3	10194.7	6.08	179.68	10194.1	-22.2	0.1	1.00	179.68	-22.2		
4	11988.1	6.08	179.68	11980.5	-180.0	1.0	0.00	0.00	-180.0		
5	12790.2	90.00	359.60	12500.0	295.6	-2.4	12.00	179.92	295.6		
6	17306.7	90.00	359.60	12500.0	4822.0	-34.0	0.00	0.00	4822.1	PBHL(Thor 21 #701H)	

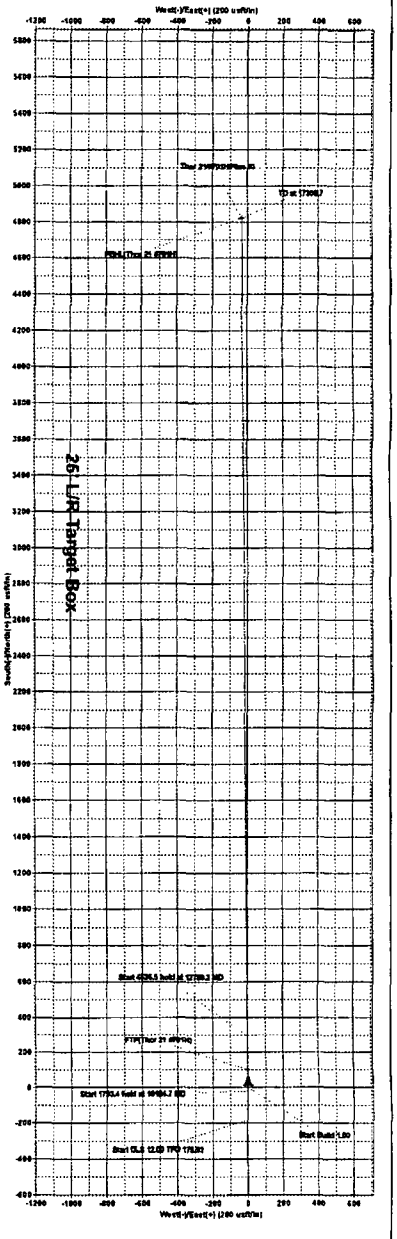
CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP(Thor 21 #701H)	12500.0	100.0	-1.0	372744.00	736737.00
PBHL(Thor 21 #701H)	12500.0	4822.0	-34.0	377466.00	736704.00





EOG Resources - Midland

Lea County, NM (NAD 27 NME)
Thor 21
#701H

OH

Plan: Plan #1

Standard Planning Report

03 December, 2014

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	***TVD Reference:***	KB = 25 @ 3277.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Site:	Thor 21	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	*Lea County, NM (NAD 27 NME)*		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Thor 21				
Site Position:		**Northing:**	372,644.00 usft	**Latitude:**	32° 1' 19.964 N
From:	Map	**Easting:**	736,738.00 usft	**Longitude:**	103° 34' 10.110 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.41 °

Well	#701H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	372,644.00 usft	**Latitude:**	32° 1' 19.964 N
	+E/-W	0.0 usft	**Easting:**	736,738.00 usft	**Longitude:**	103° 34' 10.110 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,252.0 usft

Wellbore	OH			
Magnetics	***Model Name***	***Sample Date***	***Declination (°)***	***Dip Angle (°)***	***Field Strength (nT)***
	IGRF201014	5/5/2015	7.09	59.90	48,107

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	359.60	

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	
9,690.0	0.00	0.00	9,690.0	0.0	0.0	0.00	0.00	0.00	0.00	
10,194.7	5.05	179.68	10,194.1	-22.2	0.1	1.00	1.00	0.00	179.68	
11,988.1	5.05	179.68	11,980.5	-180.0	1.0	0.00	0.00	0.00	0.00	
12,780.2	90.00	359.60	12,500.0	295.6	-2.4	12.00	10.73	22.72	179.92	
17,306.7	90.00	359.60	12,500.0	4,822.0	-34.0	0.00	0.00	0.00	0.00	PBHL(Thor 21 #701H

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Site:	Thor 21	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

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Site:	Thor 21	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00
9,690.0	0.00	0.00	9,690.0	0.0	0.0	0.0	0.00	0.00	0.00
9,700.0	0.10	179.68	9,700.0	0.0	0.0	0.0	1.00	1.00	0.00
9,800.0	1.10	179.68	9,800.0	-1.1	0.0	-1.1	1.00	1.00	0.00
9,900.0	2.10	179.68	9,900.0	-3.8	0.0	-3.8	1.00	1.00	0.00
10,000.0	3.10	179.68	9,999.8	-8.4	0.0	-8.4	1.00	1.00	0.00
10,100.0	4.10	179.68	10,099.7	-14.7	0.1	-14.7	1.00	1.00	0.00
10,194.7	5.05	179.68	10,194.1	-22.2	0.1	-22.2	1.00	1.00	0.00
10,200.0	5.05	179.68	10,199.3	-22.7	0.1	-22.7	0.00	0.00	0.00
10,300.0	5.05	179.68	10,298.9	-31.5	0.2	-31.5	0.00	0.00	0.00
10,400.0	5.05	179.68	10,398.6	-40.3	0.2	-40.3	0.00	0.00	0.00
10,500.0	5.05	179.68	10,498.2	-49.1	0.3	-49.1	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Site:	Thor 21	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
10,600.0	5.05	179.68	10,597.8	-57.9	0.3	-57.9	0.00	0.00	0.00
10,700.0	5.05	179.68	10,697.4	-66.7	0.4	-66.7	0.00	0.00	0.00
10,800.0	5.05	179.68	10,797.0	-75.5	0.4	-75.5	0.00	0.00	0.00
10,900.0	5.05	179.68	10,896.6	-84.3	0.5	-84.3	0.00	0.00	0.00
11,000.0	5.05	179.68	10,996.2	-93.1	0.5	-93.1	0.00	0.00	0.00
11,100.0	5.05	179.68	11,095.8	-101.9	0.6	-101.9	0.00	0.00	0.00
11,200.0	5.05	179.68	11,195.4	-110.7	0.6	-110.7	0.00	0.00	0.00
11,300.0	5.05	179.68	11,295.1	-119.5	0.7	-119.5	0.00	0.00	0.00
11,400.0	5.05	179.68	11,394.7	-128.2	0.7	-128.3	0.00	0.00	0.00
11,500.0	5.05	179.68	11,494.3	-137.0	0.8	-137.0	0.00	0.00	0.00
11,600.0	5.05	179.68	11,593.9	-145.8	0.8	-145.8	0.00	0.00	0.00
11,700.0	5.05	179.68	11,693.5	-154.6	0.9	-154.6	0.00	0.00	0.00
11,800.0	5.05	179.68	11,793.1	-163.4	0.9	-163.4	0.00	0.00	0.00
11,900.0	5.05	179.68	11,892.7	-172.2	1.0	-172.2	0.00	0.00	0.00
11,988.1	5.05	179.68	11,980.5	-180.0	1.0	-180.0	0.00	0.00	0.00
12,000.0	3.62	179.71	11,992.4	-180.9	1.0	-180.9	12.00	-12.00	0.25
12,025.0	0.62	180.22	12,017.3	-181.8	1.0	-181.8	12.00	-12.00	2.05
12,050.0	2.38	359.44	12,042.3	-181.4	1.0	-181.4	12.00	7.01	716.87
12,075.0	5.38	359.53	12,067.3	-179.7	1.0	-179.7	12.00	12.00	0.36
12,100.0	8.38	359.55	12,092.1	-176.7	1.0	-176.8	12.00	12.00	0.10
12,125.0	11.38	359.57	12,116.7	-172.5	0.9	-172.5	12.00	12.00	0.05
12,150.0	14.38	359.57	12,141.1	-166.9	0.9	-166.9	12.00	12.00	0.03
12,175.0	17.38	359.58	12,165.1	-160.1	0.9	-160.1	12.00	12.00	0.02
12,200.0	20.38	359.58	12,188.8	-152.0	0.8	-152.0	12.00	12.00	0.01
12,225.0	23.38	359.58	12,212.0	-142.7	0.7	-142.7	12.00	12.00	0.01
12,250.0	26.38	359.59	12,234.7	-132.1	0.7	-132.1	12.00	12.00	0.01
12,275.0	29.38	359.59	12,256.8	-120.4	0.6	-120.5	12.00	12.00	0.01
12,300.0	32.38	359.59	12,278.2	-107.6	0.5	-107.6	12.00	12.00	0.01
12,325.0	35.38	359.59	12,299.0	-93.7	0.4	-93.7	12.00	12.00	0.00
12,350.0	38.38	359.59	12,319.0	-78.7	0.3	-78.7	12.00	12.00	0.00
12,375.0	41.38	359.59	12,338.1	-62.7	0.2	-62.7	12.00	12.00	0.00
12,400.0	44.38	359.59	12,356.5	-45.7	0.0	-45.7	12.00	12.00	0.00
12,425.0	47.38	359.59	12,373.9	-27.7	-0.1	-27.7	12.00	12.00	0.00
12,450.0	50.38	359.59	12,390.3	-8.9	-0.2	-8.9	12.00	12.00	0.00
12,475.0	53.38	359.59	12,405.7	10.8	-0.4	10.8	12.00	12.00	0.00
12,500.0	56.38	359.60	12,420.1	31.2	-0.5	31.2	12.00	12.00	0.00
12,525.0	59.38	359.60	12,433.4	52.4	-0.7	52.4	12.00	12.00	0.00
12,550.0	62.38	359.60	12,445.6	74.2	-0.8	74.2	12.00	12.00	0.00
12,575.0	65.38	359.60	12,456.6	96.7	-1.0	96.7	12.00	12.00	0.00
12,595.1	67.79	359.60	12,464.6	115.1	-1.1	115.1	12.00	12.00	0.00
FTP(Thor 21 #701H)									
12,600.0	68.38	359.60	12,466.4	119.7	-1.1	119.7	12.00	12.00	0.00
12,625.0	71.38	359.60	12,475.0	143.1	-1.3	143.1	12.00	12.00	0.00
12,650.0	74.38	359.60	12,482.4	167.0	-1.5	167.0	12.00	12.00	0.00
12,675.0	77.38	359.60	12,488.5	191.3	-1.6	191.3	12.00	12.00	0.00
12,700.0	80.38	359.60	12,493.3	215.8	-1.8	215.8	12.00	12.00	0.00
12,725.0	83.38	359.60	12,496.8	240.5	-2.0	240.5	12.00	12.00	0.00
12,750.0	86.38	359.60	12,499.0	265.4	-2.2	265.4	12.00	12.00	0.00
12,775.0	89.38	359.60	12,500.0	290.4	-2.3	290.4	12.00	12.00	0.00
12,780.2	90.00	359.60	12,500.0	295.6	-2.4	295.6	12.00	12.00	0.00
12,800.0	90.00	359.60	12,500.0	315.4	-2.5	315.4	0.00	0.00	0.00
12,900.0	90.00	359.60	12,500.0	415.4	-3.2	415.4	0.00	0.00	0.00
13,000.0	90.00	359.60	12,500.0	515.4	-3.9	515.4	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Site:	Thor 21	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
13,100.0	90.00	359.60	12,500.0	615.4	-4.6	615.4	0.00	0.00	0.00
13,200.0	90.00	359.60	12,500.0	715.4	-5.3	715.4	0.00	0.00	0.00
13,300.0	90.00	359.60	12,500.0	815.4	-6.0	815.4	0.00	0.00	0.00
13,400.0	90.00	359.60	12,500.0	915.4	-6.7	915.4	0.00	0.00	0.00
13,500.0	90.00	359.60	12,500.0	1,015.4	-7.4	1,015.4	0.00	0.00	0.00
13,600.0	90.00	359.60	12,500.0	1,115.4	-8.1	1,115.4	0.00	0.00	0.00
13,700.0	90.00	359.60	12,500.0	1,215.4	-8.8	1,215.4	0.00	0.00	0.00
13,800.0	90.00	359.60	12,500.0	1,315.4	-9.5	1,315.4	0.00	0.00	0.00
13,900.0	90.00	359.60	12,500.0	1,415.4	-10.2	1,415.4	0.00	0.00	0.00
14,000.0	90.00	359.60	12,500.0	1,515.4	-10.9	1,515.4	0.00	0.00	0.00
14,100.0	90.00	359.60	12,500.0	1,615.4	-11.6	1,615.4	0.00	0.00	0.00
14,200.0	90.00	359.60	12,500.0	1,715.4	-12.3	1,715.4	0.00	0.00	0.00
14,300.0	90.00	359.60	12,500.0	1,815.4	-13.0	1,815.4	0.00	0.00	0.00
14,400.0	90.00	359.60	12,500.0	1,915.4	-13.7	1,915.4	0.00	0.00	0.00
14,500.0	90.00	359.60	12,500.0	2,015.4	-14.4	2,015.4	0.00	0.00	0.00
14,600.0	90.00	359.60	12,500.0	2,115.4	-15.1	2,115.4	0.00	0.00	0.00
14,700.0	90.00	359.60	12,500.0	2,215.4	-15.8	2,215.4	0.00	0.00	0.00
14,800.0	90.00	359.60	12,500.0	2,315.4	-16.5	2,315.4	0.00	0.00	0.00
14,900.0	90.00	359.60	12,500.0	2,415.4	-17.2	2,415.4	0.00	0.00	0.00
15,000.0	90.00	359.60	12,500.0	2,515.4	-17.9	2,515.4	0.00	0.00	0.00
15,100.0	90.00	359.60	12,500.0	2,615.4	-18.6	2,615.4	0.00	0.00	0.00
15,200.0	90.00	359.60	12,500.0	2,715.4	-19.3	2,715.4	0.00	0.00	0.00
15,300.0	90.00	359.60	12,500.0	2,815.4	-20.0	2,815.4	0.00	0.00	0.00
15,400.0	90.00	359.60	12,500.0	2,915.4	-20.7	2,915.4	0.00	0.00	0.00
15,500.0	90.00	359.60	12,500.0	3,015.3	-21.4	3,015.4	0.00	0.00	0.00
15,600.0	90.00	359.60	12,500.0	3,115.3	-22.1	3,115.4	0.00	0.00	0.00
15,700.0	90.00	359.60	12,500.0	3,215.3	-22.8	3,215.4	0.00	0.00	0.00
15,800.0	90.00	359.60	12,500.0	3,315.3	-23.5	3,315.4	0.00	0.00	0.00
15,900.0	90.00	359.60	12,500.0	3,415.3	-24.2	3,415.4	0.00	0.00	0.00
16,000.0	90.00	359.60	12,500.0	3,515.3	-24.9	3,515.4	0.00	0.00	0.00
16,100.0	90.00	359.60	12,500.0	3,615.3	-25.6	3,615.4	0.00	0.00	0.00
16,200.0	90.00	359.60	12,500.0	3,715.3	-26.3	3,715.4	0.00	0.00	0.00
16,300.0	90.00	359.60	12,500.0	3,815.3	-27.0	3,815.4	0.00	0.00	0.00
16,400.0	90.00	359.60	12,500.0	3,915.3	-27.7	3,915.4	0.00	0.00	0.00
16,500.0	90.00	359.60	12,500.0	4,015.3	-28.4	4,015.4	0.00	0.00	0.00
16,600.0	90.00	359.60	12,500.0	4,115.3	-29.1	4,115.4	0.00	0.00	0.00
16,700.0	90.00	359.60	12,500.0	4,215.3	-29.8	4,215.4	0.00	0.00	0.00
16,800.0	90.00	359.60	12,500.0	4,315.3	-30.5	4,315.4	0.00	0.00	0.00
16,900.0	90.00	359.60	12,500.0	4,415.3	-31.2	4,415.4	0.00	0.00	0.00
17,000.0	90.00	359.60	12,500.0	4,515.3	-31.9	4,515.4	0.00	0.00	0.00
17,100.0	90.00	359.60	12,500.0	4,615.3	-32.6	4,615.4	0.00	0.00	0.00
17,200.0	90.00	359.60	12,500.0	4,715.3	-33.3	4,715.4	0.00	0.00	0.00
17,306.7	90.00	359.60	12,500.0	4,822.0	-34.0	4,822.1	0.00	0.00	0.00
PBHL(Thor 21 #701H)									

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3277.0usft (H&P 260)
Site:	Thor 21	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP(Thor 21 #701H) - plan misses target center by 38.5usft at 12595.1usft MD (12464.6 TVD, 115.1 N, -1.1 E) - Point	0.00	0.00	12,500.0	100.0	-1.0	372,744.00	736,737.00	32° 1' 20.953 N	103° 34' 10.114 W
PBHL(Thor 21 #701H) - plan hits target center - Point	0.00	0.00	12,500.0	4,822.0	-34.0	377,466.00	736,704.00	32° 2' 7.684 N	103° 34' 10.109 W