

HOBBS OCD

JUN 28 2018

RECEIVED

30-025-44950



Lea County, NM (NAD 83 NME)

Thor 21 #201H

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: #201H

KB = 28 @ 3310.0usft
Northing 777242.00 Easting 777648.00
Latitude 32° 2' 5.570 N Longitude 103° 34' 14.841 W

SECTION DETAILS

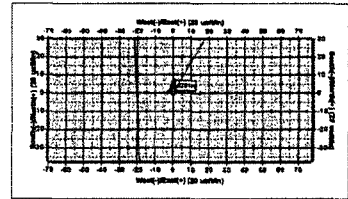
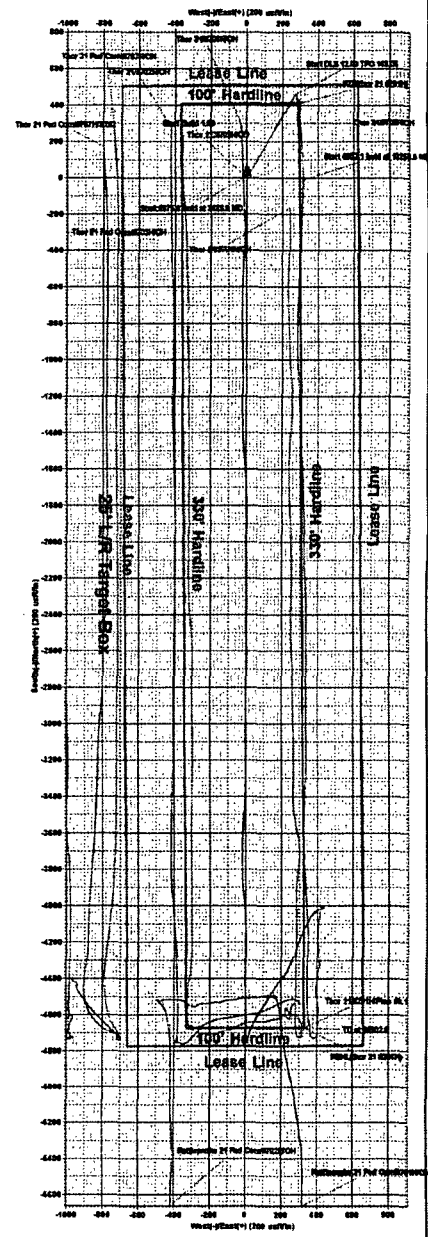
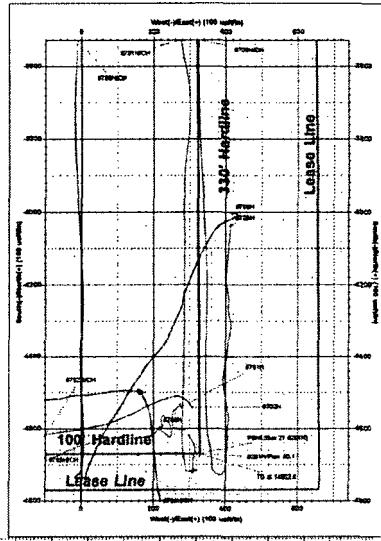
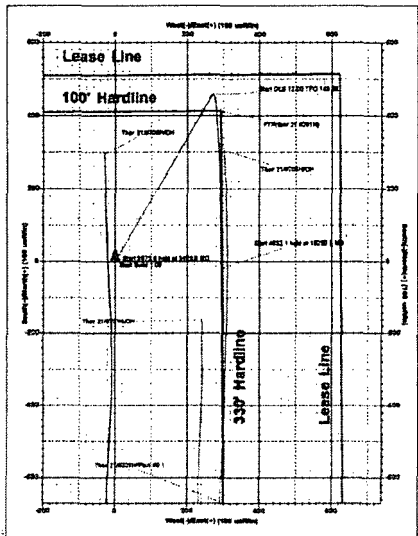
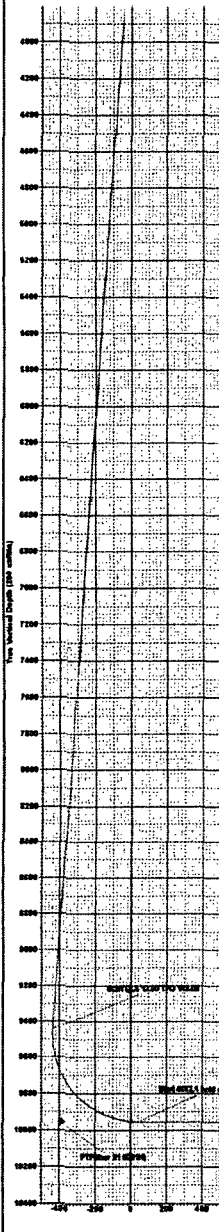
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VFace	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	3200.0	0.00	0.00	3200.0	0.0	0.0	0.00	0.00	0.0		
3	3489.9	4.90	30.44	3489.3	18.0	10.8	1.00	30.44	-17.3		
4	3648.4	4.90	30.44	3643.8	489.0	288.2	0.00	0.00	-438.0		
5	10210.0	90.00	179.88	9968.6	-18.0	286.0	12.00	149.00	88.6		
6	14802.6	90.00	179.88	9968.0	-4870.0	328.0	0.00	0.00	4681.6	PBH4(Thor 21 #201H)	

CASING DETAILS

No casing data is available

WELLSHORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
PBH4(Thor 21 #201H)	9968.0	412.0	282.0	777854.00	777940.00
FTF(Por 21 #201H)					





EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Thor 21

#201H

OH

Plan: Plan #0.1

Standard Planning Report

28 June, 2018



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #201H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #201H
TVD Reference: KB = 25 @ 3310.0usft
MD Reference: KB = 25 @ 3310.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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

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

Well: #201H
Well Position: +N/-S 4,596.0 usft Northing: 377,242.00 usft Latitude: 32° 2' 5.370 N
+E/-W -218.0 usft Easting: 777,648.00 usft Longitude: 103° 34' 14.641 W
Position Uncertainty: 0.0 usft Wellhead Elevation: Ground Level: 3,285.0 usft

Wellbore: OH
Magnetics: Model Name Sample Date Declination (") Dip Angle (") Field Strength (nT)
 IGRF2015 6/28/2018 6.83 59.88 47,721.02809892

Design: Plan #0.1
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 0.0 175.98

Plan Survey Tool Program Date 6/28/2018

Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1 0.0	14,902.6	Plan #0.1 (OH)	MWD	
			OWSG MWD - Standard	

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,489.9	4.90	30.44	3,489.3	18.0	10.6	1.00	1.00	0.00	30.44	
9,465.4	4.90	30.44	9,443.0	458.0	269.2	0.00	0.00	0.00	0.00	
10,250.5	90.00	179.59	9,955.0	-18.0	295.0	12.00	10.84	19.00	149.06	
14,902.6	90.00	179.59	9,955.0	-4,670.0	328.0	0.00	0.00	0.00	0.00	PBHL(thor 21 #201H)



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Thor 21
 Well: #201H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #201H
 TVD Reference: KB = 25 @ 3310.0usft
 MD Reference: KB = 25 @ 3310.0usft
 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	1.00	30.44	3,100.0	0.8	0.4	-0.7	1.00	1.00	0.00
3,200.0	2.00	30.44	3,200.0	3.0	1.8	-2.9	1.00	1.00	0.00
3,300.0	3.00	30.44	3,299.9	6.8	4.0	-6.5	1.00	1.00	0.00
3,400.0	4.00	30.44	3,399.7	12.0	7.1	-11.5	1.00	1.00	0.00
3,489.9	4.90	30.44	3,489.3	18.0	10.6	-17.3	1.00	1.00	0.00
3,500.0	4.90	30.44	3,499.4	18.8	11.0	-18.0	0.00	0.00	0.00
3,600.0	4.90	30.44	3,599.0	26.2	15.4	-25.0	0.00	0.00	0.00
3,700.0	4.90	30.44	3,698.6	33.5	19.7	-32.1	0.00	0.00	0.00
3,800.0	4.90	30.44	3,798.3	40.9	24.0	-39.1	0.00	0.00	0.00
3,900.0	4.90	30.44	3,897.9	48.2	28.4	-46.1	0.00	0.00	0.00
4,000.0	4.90	30.44	3,997.5	55.6	32.7	-53.2	0.00	0.00	0.00
4,100.0	4.90	30.44	4,097.2	63.0	37.0	-60.2	0.00	0.00	0.00
4,200.0	4.90	30.44	4,196.8	70.3	41.3	-67.3	0.00	0.00	0.00
4,300.0	4.90	30.44	4,296.4	77.7	45.7	-74.3	0.00	0.00	0.00
4,400.0	4.90	30.44	4,396.1	85.1	50.0	-81.3	0.00	0.00	0.00
4,500.0	4.90	30.44	4,495.7	92.4	54.3	-88.4	0.00	0.00	0.00
4,600.0	4.90	30.44	4,595.3	99.8	58.6	-95.4	0.00	0.00	0.00
4,700.0	4.90	30.44	4,695.0	107.1	63.0	-102.5	0.00	0.00	0.00
4,800.0	4.90	30.44	4,794.6	114.5	67.3	-109.5	0.00	0.00	0.00
4,900.0	4.90	30.44	4,894.3	121.9	71.6	-116.5	0.00	0.00	0.00
5,000.0	4.90	30.44	4,993.9	129.2	75.9	-123.6	0.00	0.00	0.00
5,100.0	4.90	30.44	5,093.5	136.6	80.3	-130.6	0.00	0.00	0.00
5,200.0	4.90	30.44	5,193.2	144.0	84.6	-137.7	0.00	0.00	0.00



Planning Report

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Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #201H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #201H
TVD Reference: KB = 25 @ 3310.0usft
MD Reference: KB = 25 @ 3310.0usft
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)
5,300.0	4.90	30.44	5,292.8	151.3	88.9	-144.7	0.00	0.00	0.00
5,400.0	4.90	30.44	5,392.4	158.7	93.3	-151.8	0.00	0.00	0.00
5,500.0	4.90	30.44	5,492.1	166.0	97.6	-158.8	0.00	0.00	0.00
5,600.0	4.90	30.44	5,591.7	173.4	101.9	-165.8	0.00	0.00	0.00
5,700.0	4.90	30.44	5,691.3	180.8	106.2	-172.9	0.00	0.00	0.00
5,800.0	4.90	30.44	5,791.0	188.1	110.6	-179.9	0.00	0.00	0.00
5,900.0	4.90	30.44	5,890.6	195.5	114.9	-187.0	0.00	0.00	0.00
6,000.0	4.90	30.44	5,990.2	202.9	119.2	-194.0	0.00	0.00	0.00
6,100.0	4.90	30.44	6,089.9	210.2	123.5	-201.0	0.00	0.00	0.00
6,200.0	4.90	30.44	6,189.5	217.6	127.9	-208.1	0.00	0.00	0.00
6,300.0	4.90	30.44	6,289.1	224.9	132.2	-215.1	0.00	0.00	0.00
6,400.0	4.90	30.44	6,388.8	232.3	136.5	-222.2	0.00	0.00	0.00
6,500.0	4.90	30.44	6,488.4	239.7	140.9	-229.2	0.00	0.00	0.00
6,600.0	4.90	30.44	6,588.0	247.0	145.2	-236.2	0.00	0.00	0.00
6,700.0	4.90	30.44	6,687.7	254.4	149.5	-243.3	0.00	0.00	0.00
6,800.0	4.90	30.44	6,787.3	261.7	153.8	-250.3	0.00	0.00	0.00
6,900.0	4.90	30.44	6,886.9	269.1	158.2	-257.4	0.00	0.00	0.00
7,000.0	4.90	30.44	6,986.6	276.5	162.5	-264.4	0.00	0.00	0.00
7,100.0	4.90	30.44	7,086.2	283.8	166.8	-271.5	0.00	0.00	0.00
7,200.0	4.90	30.44	7,185.8	291.2	171.1	-278.5	0.00	0.00	0.00
7,300.0	4.90	30.44	7,285.5	298.6	175.5	-285.5	0.00	0.00	0.00
7,400.0	4.90	30.44	7,385.1	305.9	179.8	-292.6	0.00	0.00	0.00
7,500.0	4.90	30.44	7,484.8	313.3	184.1	-299.6	0.00	0.00	0.00
7,600.0	4.90	30.44	7,584.4	320.6	188.5	-306.7	0.00	0.00	0.00
7,700.0	4.90	30.44	7,684.0	328.0	192.8	-313.7	0.00	0.00	0.00
7,800.0	4.90	30.44	7,783.7	335.4	197.1	-320.7	0.00	0.00	0.00
7,900.0	4.90	30.44	7,883.3	342.7	201.4	-327.8	0.00	0.00	0.00
8,000.0	4.90	30.44	7,982.9	350.1	205.8	-334.8	0.00	0.00	0.00
8,100.0	4.90	30.44	8,082.6	357.5	210.1	-341.9	0.00	0.00	0.00
8,200.0	4.90	30.44	8,182.2	364.8	214.4	-348.9	0.00	0.00	0.00
8,300.0	4.90	30.44	8,281.8	372.2	218.7	-355.9	0.00	0.00	0.00
8,400.0	4.90	30.44	8,381.5	379.5	223.1	-363.0	0.00	0.00	0.00
8,500.0	4.90	30.44	8,481.1	386.9	227.4	-370.0	0.00	0.00	0.00
8,600.0	4.90	30.44	8,580.7	394.3	231.7	-377.1	0.00	0.00	0.00
8,700.0	4.90	30.44	8,680.4	401.6	236.0	-384.1	0.00	0.00	0.00
8,800.0	4.90	30.44	8,780.0	409.0	240.4	-391.2	0.00	0.00	0.00
8,900.0	4.90	30.44	8,879.6	416.4	244.7	-398.2	0.00	0.00	0.00
9,000.0	4.90	30.44	8,979.3	423.7	249.0	-405.2	0.00	0.00	0.00
9,100.0	4.90	30.44	9,078.9	431.1	253.4	-412.3	0.00	0.00	0.00
9,200.0	4.90	30.44	9,178.5	438.4	257.7	-419.3	0.00	0.00	0.00
9,300.0	4.90	30.44	9,278.2	445.8	262.0	-426.4	0.00	0.00	0.00
9,400.0	4.90	30.44	9,377.8	453.2	266.3	-433.4	0.00	0.00	0.00
9,465.4	4.90	30.44	9,443.0	458.0	269.2	-438.0	0.00	0.00	0.00
9,475.0	3.96	39.01	9,452.5	458.6	269.6	-438.6	12.00	-9.83	89.67
9,500.0	2.52	88.26	9,477.5	459.3	270.7	-439.2	12.00	-5.77	197.02
9,525.0	3.87	139.08	9,502.5	458.7	271.8	-438.5	12.00	5.41	203.27
9,550.0	6.45	156.72	9,527.4	456.7	272.9	-436.5	12.00	10.32	70.56
9,575.0	9.29	164.00	9,552.1	453.5	274.0	-433.2	12.00	11.34	29.13
9,600.0	12.20	167.87	9,576.7	449.0	275.1	-428.6	12.00	11.66	15.46
9,625.0	15.15	170.25	9,601.0	443.2	276.2	-422.7	12.00	11.79	9.54
9,650.0	18.11	171.87	9,624.9	436.1	277.3	-415.6	12.00	11.86	6.48
9,675.0	21.09	173.05	9,648.5	427.8	278.4	-407.2	12.00	11.90	4.71
9,700.0	24.07	173.95	9,671.6	418.3	279.5	-397.7	12.00	11.92	3.59
9,725.0	27.05	174.66	9,694.1	407.5	280.6	-386.9	12.00	11.94	2.84



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #201H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #201H
TVD Reference: KB = 25 @ 3310.0usft
MD Reference: KB = 25 @ 3310.0usft
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)
9,750.0	30.04	175.23	9,716.1	395.6	281.6	-374.9	12.00	11.95	2.31
9,775.0	33.03	175.72	9,737.4	382.6	282.6	-361.9	12.00	11.96	1.93
9,800.0	36.02	176.13	9,758.0	368.5	283.6	-347.7	12.00	11.96	1.64
9,825.0	39.01	176.48	9,777.8	353.3	284.6	-332.5	12.00	11.97	1.42
9,850.0	42.00	176.80	9,796.8	337.1	285.6	-316.2	12.00	11.97	1.25
9,875.0	45.00	177.07	9,814.9	319.9	286.5	-299.0	12.00	11.98	1.11
9,900.0	47.99	177.33	9,832.2	301.8	287.4	-280.9	12.00	11.98	1.00
FTP(thor 21 #201H)									
9,925.0	50.99	177.55	9,848.4	282.8	288.2	-261.9	12.00	11.98	0.91
9,950.0	53.98	177.76	9,863.6	263.0	289.0	-242.1	12.00	11.98	0.84
9,975.0	56.98	177.96	9,877.8	242.4	289.8	-221.5	12.00	11.98	0.78
10,000.0	59.97	178.14	9,890.8	221.1	290.5	-200.2	12.00	11.98	0.73
10,025.0	62.97	178.31	9,902.8	199.2	291.2	-178.3	12.00	11.98	0.68
10,050.0	65.97	178.47	9,913.6	176.6	291.8	-155.7	12.00	11.99	0.65
10,075.0	68.96	178.63	9,923.1	153.5	292.4	-132.7	12.00	11.99	0.62
10,100.0	71.96	178.77	9,931.5	130.0	293.0	-109.1	12.00	11.99	0.59
10,125.0	74.96	178.92	9,938.6	106.0	293.4	-85.2	12.00	11.99	0.57
10,150.0	77.95	179.06	9,944.5	81.7	293.9	-60.9	12.00	11.99	0.56
10,175.0	80.95	179.19	9,949.1	57.2	294.3	-36.4	12.00	11.99	0.55
10,200.0	83.95	179.33	9,952.3	32.4	294.6	-11.7	12.00	11.99	0.54
10,225.0	86.94	179.46	9,954.3	7.5	294.8	13.2	12.00	11.99	0.53
10,250.5	90.00	179.59	9,955.0	-18.0	295.0	38.6	12.00	11.99	0.53
10,300.0	90.00	179.59	9,955.0	-67.5	295.4	88.1	0.00	0.00	0.00
10,400.0	90.00	179.59	9,955.0	-167.5	296.1	187.9	0.00	0.00	0.00
10,500.0	90.00	179.59	9,955.0	-267.5	296.8	287.7	0.00	0.00	0.00
10,600.0	90.00	179.59	9,955.0	-367.5	297.5	387.5	0.00	0.00	0.00
10,700.0	90.00	179.59	9,955.0	-467.5	298.2	487.3	0.00	0.00	0.00
10,800.0	90.00	179.59	9,955.0	-567.5	298.9	587.1	0.00	0.00	0.00
10,900.0	90.00	179.59	9,955.0	-667.5	299.6	686.9	0.00	0.00	0.00
11,000.0	90.00	179.59	9,955.0	-767.5	300.4	786.7	0.00	0.00	0.00
11,100.0	90.00	179.59	9,955.0	-867.5	301.1	886.5	0.00	0.00	0.00
11,200.0	90.00	179.59	9,955.0	-967.5	301.8	986.3	0.00	0.00	0.00
11,300.0	90.00	179.59	9,955.0	-1,067.5	302.5	1,086.1	0.00	0.00	0.00
11,400.0	90.00	179.59	9,955.0	-1,167.5	303.2	1,185.9	0.00	0.00	0.00
11,500.0	90.00	179.59	9,955.0	-1,267.5	303.9	1,285.7	0.00	0.00	0.00
11,600.0	90.00	179.59	9,955.0	-1,367.5	304.6	1,385.5	0.00	0.00	0.00
11,700.0	90.00	179.59	9,955.0	-1,467.5	305.3	1,485.3	0.00	0.00	0.00
11,800.0	90.00	179.59	9,955.0	-1,567.5	306.0	1,585.1	0.00	0.00	0.00
11,900.0	90.00	179.59	9,955.0	-1,667.5	306.7	1,684.9	0.00	0.00	0.00
12,000.0	90.00	179.59	9,955.0	-1,767.5	307.4	1,784.7	0.00	0.00	0.00
12,100.0	90.00	179.59	9,955.0	-1,867.5	308.1	1,884.5	0.00	0.00	0.00
12,200.0	90.00	179.59	9,955.0	-1,967.5	308.9	1,984.3	0.00	0.00	0.00
12,300.0	90.00	179.59	9,955.0	-2,067.5	309.6	2,084.1	0.00	0.00	0.00
12,400.0	90.00	179.59	9,955.0	-2,167.5	310.3	2,183.9	0.00	0.00	0.00
12,500.0	90.00	179.59	9,955.0	-2,267.5	311.0	2,283.7	0.00	0.00	0.00
12,600.0	90.00	179.59	9,955.0	-2,367.5	311.7	2,383.5	0.00	0.00	0.00
12,700.0	90.00	179.59	9,955.0	-2,467.5	312.4	2,483.3	0.00	0.00	0.00
12,800.0	90.00	179.59	9,955.0	-2,567.5	313.1	2,583.1	0.00	0.00	0.00
12,900.0	90.00	179.59	9,955.0	-2,667.5	313.8	2,682.9	0.00	0.00	0.00
13,000.0	90.00	179.59	9,955.0	-2,767.5	314.5	2,782.7	0.00	0.00	0.00
13,100.0	90.00	179.59	9,955.0	-2,867.5	315.2	2,882.5	0.00	0.00	0.00
13,200.0	90.00	179.59	9,955.0	-2,967.5	315.9	2,982.3	0.00	0.00	0.00
13,300.0	90.00	179.59	9,955.0	-3,067.5	316.6	3,082.1	0.00	0.00	0.00



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #201H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #201H
TVD Reference: KB = 25 @ 3310.0usft
MD Reference: KB = 25 @ 3310.0usft
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	179.59	9,955.0	-3,167.5	317.4	3,181.9	0.00	0.00	0.00
13,500.0	90.00	179.59	9,955.0	-3,267.4	318.1	3,281.7	0.00	0.00	0.00
13,600.0	90.00	179.59	9,955.0	-3,367.4	318.8	3,381.5	0.00	0.00	0.00
13,700.0	90.00	179.59	9,955.0	-3,467.4	319.5	3,481.3	0.00	0.00	0.00
13,800.0	90.00	179.59	9,955.0	-3,567.4	320.2	3,581.1	0.00	0.00	0.00
13,900.0	90.00	179.59	9,955.0	-3,667.4	320.9	3,680.9	0.00	0.00	0.00
14,000.0	90.00	179.59	9,955.0	-3,767.4	321.6	3,780.7	0.00	0.00	0.00
14,100.0	90.00	179.59	9,955.0	-3,867.4	322.3	3,880.5	0.00	0.00	0.00
14,200.0	90.00	179.59	9,955.0	-3,967.4	323.0	3,980.3	0.00	0.00	0.00
14,300.0	90.00	179.59	9,955.0	-4,067.4	323.7	4,080.1	0.00	0.00	0.00
14,400.0	90.00	179.59	9,955.0	-4,167.4	324.4	4,179.9	0.00	0.00	0.00
14,500.0	90.00	179.59	9,955.0	-4,267.4	325.1	4,279.7	0.00	0.00	0.00
14,600.0	90.00	179.59	9,955.0	-4,367.4	325.9	4,379.5	0.00	0.00	0.00
14,700.0	90.00	179.59	9,955.0	-4,467.4	326.6	4,479.3	0.00	0.00	0.00
14,800.0	90.00	179.59	9,955.0	-4,567.4	327.3	4,579.1	0.00	0.00	0.00
14,902.6	90.00	179.59	9,955.0	-4,670.0	328.0	4,681.5	0.00	0.00	0.00
PBHL(thor 21 #201H)									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL(thor 21 #201H)	0.00	0.00	9,955.0	-4,670.0	328.0	372,572.00	777,976.00	32° 1' 19.135 N	103° 34' 11.214 W
- plan hits target center									
- Point									
FTP(thor 21 #201H)	0.00	0.00	9,955.0	412.0	292.0	377,654.00	777,940.00	32° 2' 9.427 N	103° 34' 11.215 W
- plan misses target center by 165.1usft at 9900.0usft MD (9832.2 TVD, 301.8 N, 287.4 E)									
- Point									