



Lee County, NM (NAD 27 NME)
Thor 21 Fed Com #707H
H&P 647
Plan #3

PROJECT DETAILS: Lee County, NM (NAD 27 NME)
Geodetic System: US State Plane 1927 (Elevated solution)
Datum: NAD 1927 (NADCON CONUS)
Elevation: Clarke 1866
System Datum: Mean Sea Level

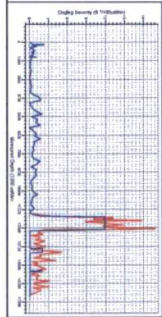
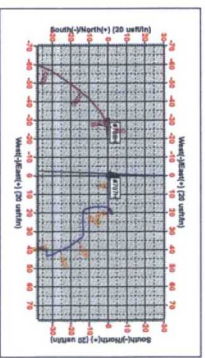
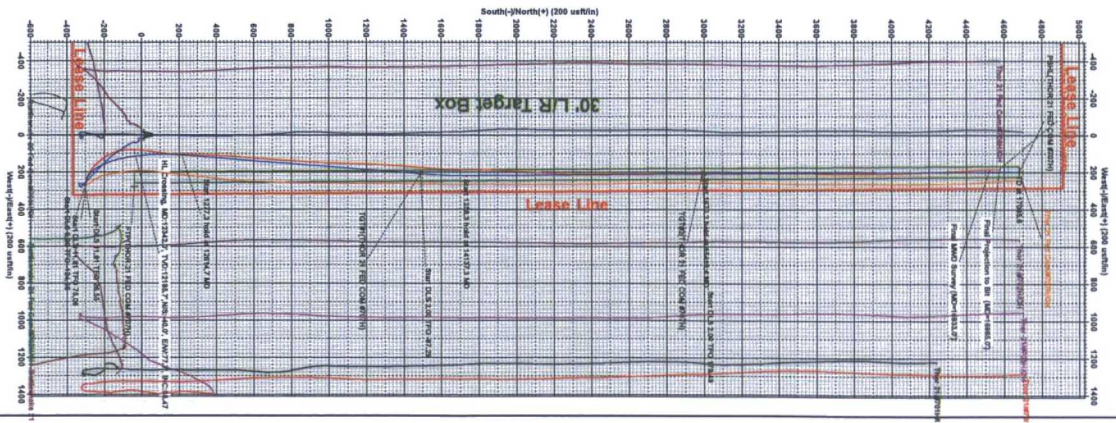
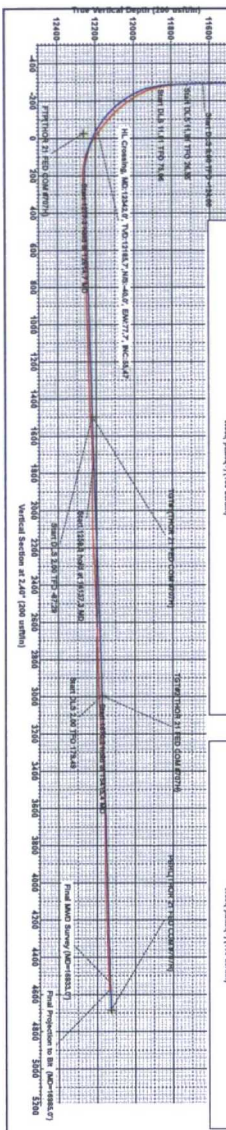
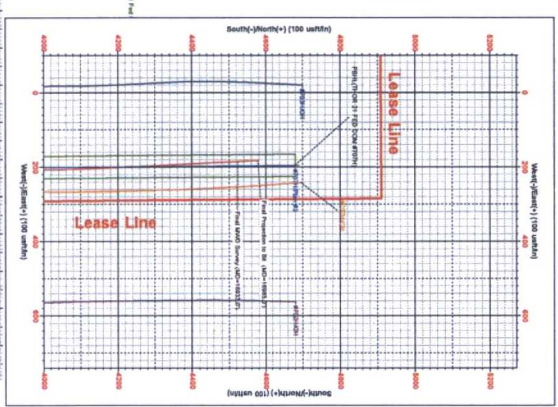
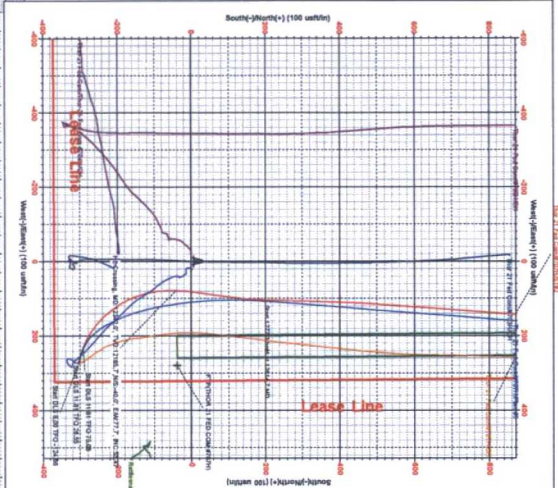
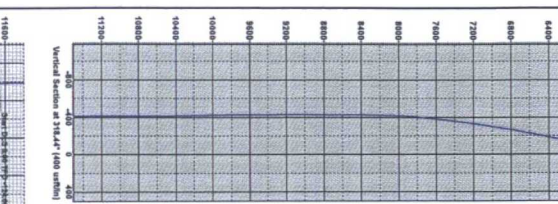
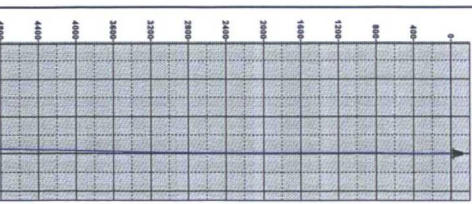


To convert a Magnetic Direction to a Grid Direction, Add 6.54°
To convert a True Direction to a Grid Direction, Subtract 0.40°

WELL DETAILS: #707H
Ground Level: 3260.0
KB = 25 @ 326.0 nT (H&P 647)
Easting: 735978.00
Latitude: 32° 7' 21.40" N
Longitude: 103° 24' 30.24" W

SECTION DETAILS									
Sec	MO	Inc	Az	TO	+N-S	-E-W	Deg	True	Vertical
1	1164.0	1.48	22.58	1163.4	-261.2	271.2	0.00	-260.8	-260.8
2	1164.0	1.48	22.58	1163.4	-261.2	271.2	0.00	-260.8	-260.8
3	1168.2	22.55	289.55	1168.5	-281.2	234.4	11.81	-281.9	-281.9
4	1284.7	91.66	4.00	1228.6	216.2	107.7	11.81	-78.06	-78.06
5	1432.0	91.66	4.00	1327.9	148.8	27.7	13.40	-13.40	-13.40
6	1417.2	91.48	388.60	1221.4	173.0	216.7	2.00	-47.28	-47.28
7	1528.4	91.48	388.60	1217.2	289.6	207.9	0.00	-289.67	-289.67
8	1708.6	91.48	388.60	1213.0	488.0	186.0	0.00	-488.1	-488.1

CASING DETAILS		WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
No casing data is available		Name	T/O	+N-S	-E-W	North	Easting
		TOTARGET 21 FED COM #707H	12172.0	2890.6	207.9	317571.60	735882.00
		FTTHOR 21 FED COM #707H	12173.0	2890.6	207.9	317571.60	735882.00
		FTTHOR 21 FED COM #707H	12182.0	4889.0	196.0	317442.00	735875.00
		TOTTHOR 21 FED COM #707H	12227.0	1488.0	207.9	317259.00	735852.50



HOBBS OCD
AUG 10 2017
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EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Thor 21 Fed Com

#707H

ST#2

Design: ST#2

PVA Report

26 June, 2017

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #707H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Site:	Thor 21 Fed Com	MD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Well:	#707H	North Reference:	Grid
Wellbore:	ST#2	Survey Calculation Method:	Minimum Curvature
Design:	ST#2	Database:	EDM 5000.14

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 Fed Com		
Site Position:		Northing:	372,581.00 usft
From:	Map	Easting:	735,478.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 19.428 N
		Longitude:	103° 34' 24.750 W
		Grid Convergence:	0.40 °

Well		#707H				
Well Position	+N/-S	0.0 usft	Northing:	372,781.00 usft	Latitude:	32° 1' 21.407 N
	+E/-W	0.0 usft	Easting:	735,478.00 usft	Longitude:	103° 34' 24.734 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,260.0 usft	

Wellbore	ST#2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/17/2017	6.94	59.88	47,819.30263798

Design		ST#2			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	11,529.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	71.58	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #707H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Site:	Thor 21 Fed Com	MD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Well:	#707H	North Reference:	Grid
Wellbore:	ST#2	Survey Calculation Method:	Minimum Curvature
Design:	ST#2	Database:	EDM 5000.14

Survey Program		Date	6/26/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
126.5	1,013.5	Wildfire MWD #1 (OH)	MWD	MWD - Standard	
1,070.0	11,529.0	Intrepid MWD #1 (OH)	MWD	MWD - Standard	
11,715.0	16,985.0	Intrepid MWD #2 (ST#2)	MWD	MWD - Standard	

Survey										
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
126.5	0.70	111.98	126.5	-0.3	0.7	0.55	0.55	0.00	0.0	0.0
158.5	1.10	71.98	158.5	-0.3	1.2	2.25	1.25	-125.00	0.0	0.0
187.5	1.10	86.98	187.5	-0.2	1.7	0.99	0.00	51.72	0.0	0.0
217.5	0.90	79.98	217.5	-0.1	2.3	0.78	-0.67	-23.33	0.0	0.0
246.5	1.00	80.98	246.5	0.0	2.7	0.35	0.34	3.45	0.0	0.0
274.5	1.20	89.98	274.5	0.0	3.3	0.94	0.71	32.14	0.0	0.0
302.5	1.00	80.98	302.5	0.0	3.8	0.94	-0.71	-32.14	0.0	0.0
332.5	1.10	87.98	332.5	0.1	4.3	0.54	0.33	23.33	0.0	0.0
364.5	1.10	86.98	364.5	0.1	5.0	0.06	0.00	-3.12	0.0	0.0
425.5	1.00	93.98	425.4	0.1	6.1	0.27	-0.16	11.48	0.0	0.0
457.5	0.90	87.98	457.4	0.1	6.6	0.44	-0.31	-18.75	0.0	0.0
489.5	1.10	84.98	489.4	0.1	7.2	0.65	0.62	-9.37	0.0	0.0
521.5	0.90	91.98	521.4	0.2	7.7	0.73	-0.62	21.87	0.0	0.0
551.5	1.00	82.98	551.4	0.2	8.2	0.60	0.33	-30.00	0.0	0.0
582.5	1.00	97.98	582.4	0.2	8.7	0.84	0.00	48.39	0.0	0.0
613.5	0.80	92.98	613.4	0.1	9.2	0.69	-0.65	-16.13	0.0	0.0
645.5	0.80	85.98	645.4	0.1	9.7	0.31	0.00	-21.87	0.0	0.0
677.5	0.90	93.98	677.4	0.1	10.2	0.48	0.31	25.00	0.0	0.0
708.5	0.80	91.98	708.4	0.1	10.6	0.34	-0.32	-6.45	0.0	0.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #707H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Site:	Thor 21 Fed Com	MD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Well:	#707H	North Reference:	Grid
Wellbore:	ST#2	Survey Calculation Method:	Minimum Curvature
Design:	ST#2	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
740.5	1.00	98.98	740.4	0.1	11.1	0.71	0.62	21.87	0.0	0.0	
771.5	0.90	89.98	771.4	0.0	11.6	0.58	-0.32	-29.03	0.0	0.0	
802.5	1.00	99.98	802.4	0.0	12.1	0.62	0.32	32.26	0.0	0.0	
834.5	0.90	92.98	834.4	-0.1	12.7	0.48	-0.31	-21.87	0.0	0.0	
861.5	0.90	96.98	861.4	-0.1	13.1	0.23	0.00	14.81	0.0	0.0	
896.5	0.90	86.98	896.4	-0.1	13.6	0.45	0.00	-28.57	0.0	0.0	
958.5	0.90	88.98	958.4	-0.1	14.6	0.05	0.00	3.23	0.0	0.0	
989.5	0.60	81.98	989.4	-0.1	15.0	1.01	-0.97	-22.58	0.0	0.0	
1,013.5	0.60	89.98	1,013.4	-0.1	15.3	0.35	0.00	33.33	0.0	0.0	
1,070.0	0.70	80.10	1,069.9	0.0	15.9	0.27	0.18	-17.49	0.0	0.0	
1,257.0	0.70	66.10	1,256.9	0.6	18.1	0.09	0.00	-7.49	0.0	0.0	
1,444.0	0.40	68.40	1,443.8	1.4	19.7	0.16	-0.16	1.23	0.0	0.0	
1,631.0	0.30	57.30	1,630.8	1.9	20.7	0.06	-0.05	-5.94	0.0	0.0	
1,818.0	0.20	321.00	1,817.8	2.4	20.9	0.20	-0.05	-51.50	0.0	0.0	
2,006.0	0.40	263.60	2,005.8	2.6	20.1	0.18	0.11	-30.53	0.0	0.0	
2,193.0	0.30	229.40	2,192.8	2.2	19.1	0.12	-0.05	-18.29	0.0	0.0	
2,381.0	0.20	236.70	2,380.8	1.7	18.4	0.06	-0.05	3.88	0.0	0.0	
2,568.0	0.40	207.00	2,567.8	0.9	17.8	0.13	0.11	-15.88	0.0	0.0	
2,756.0	0.60	196.10	2,755.8	-0.6	17.3	0.12	0.11	-5.80	0.0	0.0	
2,943.0	1.10	186.90	2,942.8	-3.3	16.8	0.28	0.27	-4.92	0.0	0.0	
3,130.0	1.10	167.30	3,129.8	-6.9	17.0	0.20	0.00	-10.48	0.0	0.0	
3,317.0	1.10	174.60	3,316.7	-10.4	17.5	0.07	0.00	3.90	0.0	0.0	
3,505.0	1.20	122.10	3,504.7	-13.3	19.4	0.54	0.05	-27.93	0.0	0.0	
3,692.0	3.60	82.50	3,691.5	-13.5	26.8	1.49	1.28	-21.18	0.0	0.0	
3,878.0	1.10	146.80	3,877.4	-14.3	33.6	1.76	-1.34	34.57	0.0	0.0	
4,065.0	1.20	148.50	4,064.3	-17.4	35.6	0.06	0.05	0.91	0.0	0.0	
4,253.0	1.40	135.50	4,252.3	-20.8	38.3	0.19	0.11	-6.91	0.0	0.0	

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Thor 21 Fed Com
 Well: #707H
 Wellbore: ST#2
 Design: ST#2

Local Co-ordinate Reference: Well #707H
 TVD Reference: KB = 25 @ 3285.0usft (H&P 647)
 MD Reference: KB = 25 @ 3285.0usft (H&P 647)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey										
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
4,441.0	1.10	174.40	4,440.3	-24.2	40.0	0.47	-0.16	20.69	0.0	0.0
4,628.0	2.80	149.10	4,627.1	-29.9	42.6	1.00	0.91	-13.53	0.0	0.0
4,816.0	1.00	292.70	4,815.1	-33.2	43.4	1.94	-0.96	76.38	0.0	0.0
5,004.0	0.80	260.40	5,003.1	-32.8	40.6	0.29	-0.11	-17.18	0.0	0.0
5,191.0	2.50	186.30	5,190.0	-37.1	38.9	1.29	0.91	-39.63	0.0	0.0
5,379.0	4.00	167.80	5,377.7	-47.5	39.8	0.96	0.80	-9.84	0.0	0.0
5,566.0	6.50	148.20	5,563.9	-62.9	46.8	1.63	1.34	-10.48	0.0	0.0
5,754.0	6.50	148.20	5,750.7	-81.0	58.0	0.00	0.00	0.00	0.0	0.0
5,942.0	6.40	139.70	5,937.5	-98.0	70.4	0.51	-0.05	-4.52	0.0	0.0
6,130.0	8.10	146.70	6,124.0	-117.1	84.4	1.02	0.90	3.72	0.0	0.0
6,318.0	9.60	146.60	6,309.8	-141.3	100.3	0.80	0.80	-0.05	0.0	0.0
6,506.0	12.30	137.10	6,494.3	-169.0	122.6	1.72	1.44	-5.05	0.0	0.0
6,694.0	11.10	137.00	6,678.4	-196.9	148.5	0.64	-0.64	-0.05	0.0	0.0
6,880.0	9.60	135.40	6,861.4	-221.1	171.7	0.82	-0.81	-0.86	0.0	0.0
7,067.0	8.90	132.80	7,046.0	-242.0	193.2	0.44	-0.37	-1.39	0.0	0.0
7,254.0	7.60	132.00	7,231.0	-260.1	213.0	0.70	-0.70	-0.43	0.0	0.0
7,443.0	7.00	131.70	7,418.5	-276.1	230.9	0.32	-0.32	-0.16	0.0	0.0
7,630.0	6.90	137.20	7,604.1	-292.0	247.0	0.36	-0.05	2.94	0.0	0.0
7,817.0	5.90	141.00	7,790.0	-307.7	260.7	0.58	-0.53	2.03	0.0	0.0
8,004.0	3.10	125.60	7,976.4	-318.1	270.9	1.62	-1.50	-8.24	0.0	0.0
8,192.0	1.10	101.60	8,164.2	-321.4	276.8	1.14	-1.06	-12.77	0.0	0.0
8,380.0	1.50	96.90	8,352.2	-322.1	281.0	0.22	0.21	-2.50	0.0	0.0
8,567.0	1.10	191.50	8,539.1	-324.1	283.1	1.03	-0.21	50.59	0.0	0.0
8,757.0	2.10	236.80	8,729.1	-327.8	279.8	0.81	0.53	23.84	0.0	0.0
8,944.0	0.40	171.30	8,916.0	-330.3	277.0	1.05	-0.91	-35.03	0.0	0.0
9,132.0	1.40	232.30	9,104.0	-332.4	275.3	0.67	0.53	32.45	0.0	0.0
9,318.0	1.00	230.60	9,290.0	-334.8	272.3	0.22	-0.22	-0.91	0.0	0.0

PVA Report

Company:	EOG Resources - Midland					Local Co-ordinate Reference:			Well #707H			
Project:	Lea County, NM (NAD 27 NME)					TVD Reference:			KB = 25 @ 3285.0usft (H&P 647)			
Site:	Thor 21 Fed Com					MD Reference:			KB = 25 @ 3285.0usft (H&P 647)			
Well:	#707H					North Reference:			Grid			
Wellbore:	ST#2					Survey Calculation Method:			Minimum Curvature			
Design:	ST#2					Database:			EDM 5000.14			
Survey												
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
9,506.0	1.10	252.00	9,477.9	-336.4	269.3	0.21	0.05	11.38	0.0	0.0		
9,694.0	0.90	291.30	9,665.9	-336.4	266.2	0.37	-0.11	20.90	0.0	0.0		
9,881.0	0.90	256.70	9,852.9	-336.2	263.4	0.29	0.00	-18.50	0.0	0.0		
10,069.0	1.30	311.60	10,040.9	-335.2	260.4	0.57	0.21	29.20	0.0	0.0		
10,257.0	2.30	26.00	10,228.8	-330.3	260.4	1.23	0.53	39.57	0.0	0.0		
10,444.0	1.50	19.60	10,415.7	-324.7	262.9	0.44	-0.43	-3.42	0.0	0.0		
10,633.0	1.10	42.30	10,604.6	-321.0	264.9	0.34	-0.21	12.01	0.0	0.0		
10,820.0	0.80	41.00	10,791.6	-318.7	267.0	0.16	-0.16	-0.70	0.0	0.0		
11,008.0	1.10	68.90	10,979.6	-317.0	269.5	0.29	0.16	14.84	0.0	0.0		
11,195.0	1.40	4.70	11,166.5	-314.1	271.4	0.72	0.16	-34.33	0.0	0.0		
11,382.0	1.50	0.70	11,353.5	-309.4	271.6	0.08	0.05	-2.14	0.0	0.0		
11,529.0	1.40	0.20	11,500.4	-305.7	271.6	0.07	-0.07	-0.34	0.0	0.0		
11,715.0	6.50	279.40	11,686.0	-301.7	261.3	3.45	2.74	-43.44	-9.5	1.6		
11,762.0	10.00	284.90	11,732.5	-300.2	254.7	7.63	7.45	11.70	-11.5	1.9		
11,809.0	16.10	287.90	11,778.3	-297.1	244.5	13.05	12.98	6.38	-13.4	1.8		
11,856.0	22.20	290.30	11,822.7	-292.1	230.0	13.08	12.98	5.11	-15.7	1.8		
11,903.0	26.60	294.40	11,865.5	-284.6	212.1	10.03	9.36	8.72	-17.9	2.4		
11,950.0	31.80	301.20	11,906.5	-273.8	191.9	13.11	11.06	14.47	-21.4	5.8		
11,997.0	37.80	311.20	11,945.1	-257.9	170.4	17.58	12.77	21.28	-26.3	11.9		
12,044.0	40.50	317.10	11,981.5	-237.2	149.2	9.78	5.74	12.55	-32.0	17.7		
12,091.0	42.60	322.40	12,016.7	-213.4	129.1	8.71	4.47	11.28	-36.2	24.5		
12,138.0	43.40	329.70	12,051.1	-186.9	111.2	10.72	1.70	15.53	-36.6	32.6		
12,185.0	44.90	337.70	12,084.9	-157.6	96.8	12.27	3.19	17.02	-33.2	39.3		
12,232.0	47.80	345.40	12,117.3	-125.3	86.1	13.36	6.17	16.38	-27.6	43.1		
12,279.0	50.90	353.50	12,148.0	-90.3	79.6	14.64	6.60	17.23	-20.5	43.3		
12,326.0	54.30	0.00	12,176.5	-53.1	77.5	13.15	7.23	13.83	-13.6	39.2		

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #707H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Site:	Thor 21 Fed Com	MD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Well:	#707H	North Reference:	Grid
Wellbore:	ST#2	Survey Calculation Method:	Minimum Curvature
Design:	ST#2	Database:	EDM 5000.14

Survey										
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
12,342.0	55.47	1.75	12,185.7	-40.0	77.7	11.54	7.30	10.93	-11.3	37.1
HL Crossing, MD:12342.0', TVD:12185.7', N/S:-40.0', E/W:77.7', INC:55.47										
12,373.0	57.80	5.00	12,202.8	-14.2	79.3	11.54	7.52	10.49	-6.7	32.1
12,420.0	62.60	8.90	12,226.2	26.3	84.2	12.49	10.21	8.30	-0.3	22.7
12,467.0	69.60	8.40	12,245.2	68.7	90.7	14.93	14.89	-1.06	4.4	13.6
12,513.0	75.70	6.70	12,258.9	112.2	96.4	13.72	13.26	-3.70	8.2	7.1
12,560.0	84.50	3.80	12,267.0	158.3	100.7	19.68	18.72	-6.17	10.4	3.8
12,607.0	90.50	2.30	12,269.0	205.2	103.2	13.16	12.77	-3.19	10.8	3.8
12,631.0	91.00	2.20	12,268.7	229.1	104.1	2.12	2.08	-0.42	11.1	4.7
12,725.0	91.60	1.10	12,266.6	323.1	106.8	1.33	0.64	-1.17	11.7	9.4
12,819.0	91.50	2.40	12,264.0	417.0	109.7	1.39	-0.11	1.38	11.9	13.9
12,912.0	91.40	4.30	12,261.7	509.8	115.1	2.05	-0.11	2.04	12.2	15.8
13,005.0	91.60	4.40	12,259.2	602.5	122.2	0.24	0.22	0.11	12.5	16.0
13,098.0	92.90	4.30	12,255.6	695.2	129.2	1.40	1.40	-0.11	11.5	16.3
13,192.0	91.60	3.90	12,251.9	788.9	135.9	1.45	-1.38	-0.43	10.5	16.9
13,286.0	91.30	4.60	12,249.5	882.6	142.9	0.81	-0.32	0.74	10.9	17.3
13,379.0	90.90	2.50	12,247.7	975.4	148.6	2.30	-0.43	-2.26	11.8	18.8
13,474.0	91.60	1.40	12,245.7	1,070.3	151.9	1.37	0.74	-1.16	12.5	23.1
13,567.0	91.30	0.90	12,243.3	1,163.2	153.7	0.63	-0.32	-0.54	12.9	28.5
13,661.0	91.10	2.40	12,241.3	1,257.2	156.4	1.61	-0.21	1.60	13.6	33.2
13,754.0	92.30	4.20	12,238.6	1,350.0	161.8	2.33	1.29	1.94	13.5	35.1
13,848.0	93.20	4.80	12,234.1	1,443.6	169.2	1.15	0.96	0.64	11.7	35.1
13,942.0	93.40	4.80	12,228.7	1,537.1	177.0	0.21	0.21	0.00	9.0	34.3
14,035.0	91.90	3.10	12,224.4	1,629.8	183.4	2.44	-1.61	-1.83	7.6	32.1
14,129.0	90.00	358.90	12,222.8	1,723.7	185.0	4.90	-2.02	-4.47	9.1	31.7
14,223.0	89.50	1.50	12,223.2	1,817.7	185.4	2.82	-0.53	2.77	12.6	30.7
14,317.0	89.80	2.90	12,223.8	1,911.6	189.0	1.52	0.32	1.49	16.3	26.4

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Thor 21 Fed Com
 Well: #707H
 Wellbore: ST#2
 Design: ST#2

Local Co-ordinate Reference: Well #707H
 TVD Reference: KB = 25 @ 3285.0usft (H&P 647)
 MD Reference: KB = 25 @ 3285.0usft (H&P 647)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
14,410.0	91.30	3.50	12,222.9	2,004.5	194.2	1.74	1.61	0.65	18.4	20.6	
14,504.0	91.10	2.90	12,220.9	2,098.3	199.4	0.67	-0.21	-0.64	19.5	14.7	
14,596.0	93.20	3.60	12,217.5	2,190.1	204.6	2.41	2.28	0.76	19.1	8.8	
14,690.0	92.40	0.00	12,212.9	2,283.9	207.6	3.92	-0.85	-3.83	17.6	5.2	
14,784.0	92.70	0.20	12,208.7	2,377.8	207.7	0.38	0.32	0.21	16.5	4.4	
14,878.0	91.90	359.40	12,204.9	2,471.7	207.4	1.20	-0.85	-0.85	15.8	4.0	
14,972.0	92.30	359.70	12,201.5	2,565.7	206.7	0.53	0.43	0.32	15.5	4.1	
15,066.0	91.20	359.40	12,198.6	2,659.6	205.9	1.21	-1.17	-0.32	15.7	4.2	
15,159.0	92.40	0.50	12,195.7	2,752.6	205.9	1.75	1.29	1.18	15.8	3.6	
15,253.0	90.60	359.00	12,193.2	2,846.5	205.4	2.49	-1.91	-1.60	16.5	3.4	
15,347.0	91.70	359.20	12,191.3	2,940.5	204.0	1.19	1.17	0.21	17.7	4.2	
15,441.0	93.10	0.30	12,187.4	3,034.4	203.6	1.89	1.49	1.17	16.6	3.9	
15,534.0	93.60	0.10	12,182.0	3,127.3	203.9	0.58	0.54	-0.22	13.6	3.0	
15,620.0	93.60	359.90	12,176.6	3,213.1	203.9	0.23	0.00	-0.23	10.4	2.4	
15,714.0	92.20	359.90	12,171.8	3,307.0	203.7	1.49	-1.49	0.00	8.1	1.9	
15,808.0	92.60	0.70	12,167.9	3,400.9	204.2	0.95	0.43	0.85	6.6	0.7	
15,902.0	91.60	0.70	12,164.4	3,494.8	205.4	1.06	-1.06	0.00	5.6	-1.1	
15,996.0	92.00	1.50	12,161.5	3,588.7	207.2	0.95	0.43	0.85	5.1	-3.5	
16,089.0	89.70	359.90	12,160.1	3,681.7	208.3	3.01	-2.47	-1.72	6.1	-5.3	
16,183.0	90.50	359.90	12,159.9	3,775.7	208.1	0.85	0.85	0.00	8.4	-5.8	
16,277.0	91.00	359.80	12,158.7	3,869.7	207.9	0.54	0.53	-0.11	9.6	-6.2	
16,370.0	92.20	0.20	12,156.1	3,962.7	207.9	1.36	1.29	0.43	9.5	-6.9	
16,464.0	90.70	358.00	12,153.7	4,056.6	206.4	2.83	-1.60	-2.34	9.5	-6.1	
16,558.0	90.80	357.50	12,152.5	4,150.5	202.7	0.54	0.11	-0.53	10.7	-3.0	
16,652.0	92.20	357.90	12,150.0	4,244.4	199.0	1.55	1.49	0.43	10.7	0.1	
16,746.0	91.50	356.60	12,147.0	4,338.3	194.4	1.57	-0.74	-1.38	10.1	3.9	
16,840.0	92.00	357.30	12,144.1	4,432.1	189.4	0.91	0.53	0.74	9.7	8.3	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #707H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Site:	Thor 21 Fed Com	MD Reference:	KB = 25 @ 3285.0usft (H&P 647)
Well:	#707H	North Reference:	Grid
Wellbore:	ST#2	Survey Calculation Method:	Minimum Curvature
Design:	ST#2	Database:	EDM 5000.14

Survey										
MD (usft)	Inc (°)	Azi (grld_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
16,933.0	92.00	356.90	12,140.9	4,524.9	184.7	0.43	0.00	-0.43	8.9	12.3
Final MWD Survey (MD=16933.0')										
16,985.0	92.00	356.90	12,139.1	4,576.8	181.9	0.00	0.00	0.00	8.4	14.8
Final Projection to Bit (MD=16985.0')										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,342.0	12,185.7	-40.0	77.7	HL Crossing, MD:12342.0', TVD:12185.7', N/S:-40.0', E/W:77.7', INC:55.47
16,933.0	12,140.9	4,524.9	184.7	Final MWD Survey (MD=16933.0')
16,985.0	12,139.1	4,576.8	181.9	Final Projection to Bit (MD=16985.0')

Checked By: _____	Approved By: _____	Date: _____
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