



Lea County, NM (NAD 83 NME)

Righteous 6 State Com #301H

HP 621

Plan #2

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: #301H

KB= 25' @ 3409.0usft (HP 621) 3384.0
Northing 485712.00 Easting 829327.00 Latitude 32° 19' 54.656 N Longitude 103° 24' 1.395 W



Azimuths to Grid North
True North: -0.50°
Magnetic North: 6.36°
Magnetic Field
Strength: 48002.1nT
Dip Angle: 60.19°
Date: 8/21/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.36°
To convert a Magnetic Direction to a True Direction, Add 6.86° East
To convert a True Direction to a Grid Direction, Subtract 0.50°

SECTION DETAILS

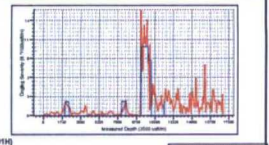
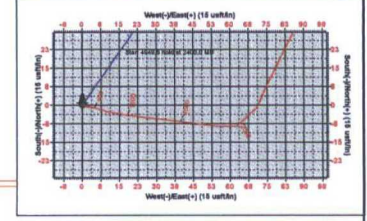
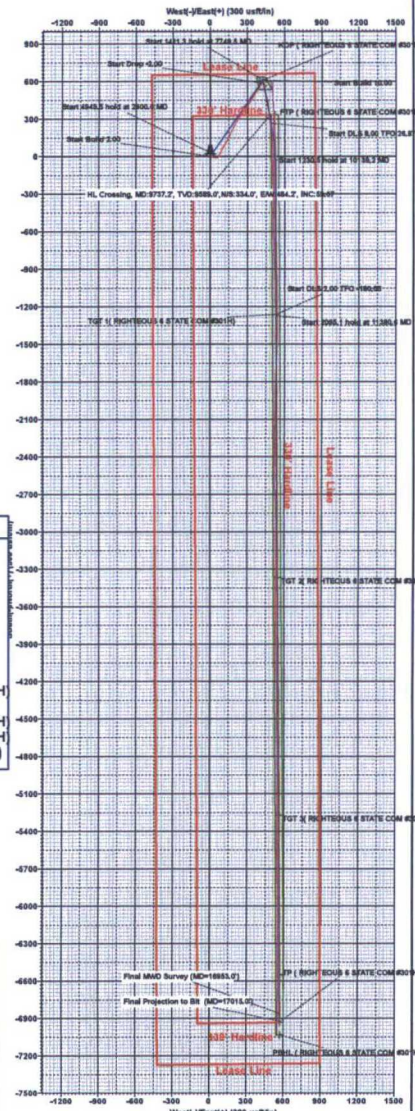
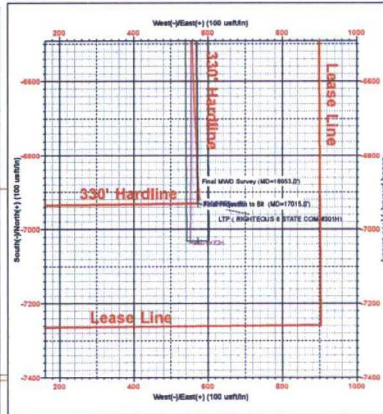
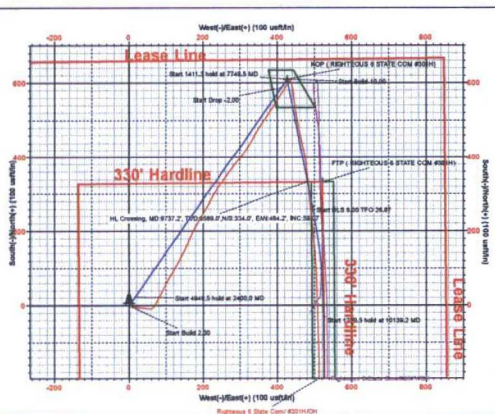
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
7349.5	8.00	35.00	2398.7	22.8	16.0	2.00	35.00	-21.4	
7748.5	0.00	0.00	7300.0	587.1	411.1	0.00	0.00	-551.3	
9160.8	0.00	0.00	9110.0	609.9	427.1	2.00	180.00	-572.7	
9831.2	67.05	168.74	9637.6	267.1	495.3	10.00	168.74	-225.5	
10139.2	89.32	179.60	9700.4	-30.5	524.5	8.00	26.87	73.6	
11369.7	89.32	179.60	9715.0	-1260.9	533.0	0.00	0.00	1300.5	TGT 1(RIGHTEOUS 6 STATE COM #301H)
11380.6	89.10	179.60	9715.2	-1271.8	533.1	2.00	-180.00	1311.4	TGT 2(RIGHTEOUS 6 STATE COM #301H)
13475.7	89.10	179.60	9748.0	-3366.6	547.6	0.00	0.00	3400.3	TGT 3(RIGHTEOUS 6 STATE COM #301H)
15381.3	89.15	179.60	9777.0	-5271.9	560.8	0.00	0.00	5300.2	LTP (RIGHTEOUS 6 STATE COM #301H)
17039.6	89.21	179.60	9800.6	-6930.0	572.3	0.00	0.00	6953.6	

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
TGT 1(RIGHTEOUS 6 STATE COM #301H)	9715.0	-1260.9	533.0	484481.10	829860.05
TGT 2(RIGHTEOUS 6 STATE COM #301H)	9748.0	-3366.6	547.6	482345.40	829874.53
TGT 3(RIGHTEOUS 6 STATE COM #301H)	9777.0	-5271.9	560.8	480440.10	829887.82
LTP (RIGHTEOUS 6 STATE COM #301H)	9800.6	-6930.0	572.3	478782.00	829898.31
FTP (RIGHTEOUS 6 STATE COM #301H)	9700.0	334.0	480440.00	829848.00	
Interp @ 9888.0 (#301H OH Intrepid MWD)	9888.0	334.0	484.2	480440.00	829811.19
KOP (RIGHTEOUS 6 STATE COM #301H)	9110.0	609.9	427.1	486321.93	829784.08
PBHL (RIGHTEOUS 6 STATE COM #301H)	9802.0	-7030.0	573.0	478682.00	829900.00



Lea County, NM (NAD 83 NME)
Righteous 6 State Com #301H
HP 621
Plan #2
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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: #301H
KB= 25' @ 3409.0usft (HP 621) 3384.0
Northing 485712.00 Easting 829327.00 Latitude 32° 19' 54.656 N Longitude 103° 24' 1.395 W
SECTION DETAILS
MD Inc Azi TVD +N-S +E-W Dleg TFace Vsect Target
0.0 0.00 0.00 0.0 0.0 0.0 0.00 0.00 0.0
2000.0 0.00 0.00 2000.0 0.0 0.0 0.00 0.00 0.0
7349.5 8.00 35.00 2398.7 22.8 16.0 2.00 35.00 -21.4
7748.5 0.00 0.00 7300.0 587.1 411.1 0.00 0.00 -551.3
9160.8 0.00 0.00 9110.0 609.9 427.1 2.00 180.00 -572.7
9831.2 67.05 168.74 9637.6 267.1 495.3 10.00 168.74 -225.5
10139.2 89.32 179.60 9700.4 -30.5 524.5 8.00 26.87 73.6
11369.7 89.32 179.60 9715.0 -1260.9 533.0 0.00 0.00 1300.5
11380.6 89.10 179.60 9715.2 -1271.8 533.1 2.00 -180.00 1311.4
13475.7 89.10 179.60 9748.0 -3366.6 547.6 0.00 0.00 3400.3
15381.3 89.15 179.60 9777.0 -5271.9 560.8 0.00 0.00 5300.2
17039.6 89.21 179.60 9800.6 -6930.0 572.3 0.00 0.00 6953.6
CASING DETAILS
No casing data is available
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)
Name TVD +N-S +E-W Northing Easting
TGT 1(RIGHTEOUS 6 STATE COM #301H) 9715.0 -1260.9 533.0 484481.10 829860.05
TGT 2(RIGHTEOUS 6 STATE COM #301H) 9748.0 -3366.6 547.6 482345.40 829874.53
TGT 3(RIGHTEOUS 6 STATE COM #301H) 9777.0 -5271.9 560.8 480440.10 829887.82
LTP (RIGHTEOUS 6 STATE COM #301H) 9800.6 -6930.0 572.3 478782.00 829898.31
FTP (RIGHTEOUS 6 STATE COM #301H) 9700.0 334.0 480440.00 829848.00
Interp @ 9888.0 (#301H OH Intrepid MWD) 9888.0 334.0 484.2 480440.00 829811.19
KOP (RIGHTEOUS 6 STATE COM #301H) 9110.0 609.9 427.1 486321.93 829784.08
PBHL (RIGHTEOUS 6 STATE COM #301H) 9802.0 -7030.0 573.0 478682.00 829900.00

EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Righteous 6 State Com

#301H

OH

Design: OH

PVA Report

20 September, 2017

HOBBBS OCD
NOV 22 2017
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PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #301H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3409.0usft (HP 621)
Site:	Righteous 6 State Com	MD Reference:	KB= 25' @ 3409.0usft (HP 621)
Well:	#301H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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	Righteous 6 State Com		
Site Position:		Northing:	485,716.00 usft
From:	Map	Easting:	829,837.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 19' 54.651 N
		Longitude:	103° 23' 57.451 W
		Grid Convergence:	0.50 °

Well	#301H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 19' 54.656 N
		Longitude:	103° 24' 3.395 W
		Ground Level:	3,384.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	8/21/2017	6.86
			60.19
			48,002.11410477

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			175.34

Survey Program	Date 9/20/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
185.0	17,015.0	Intrepid MWD (OH)	MWD
			MWD - Standard

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #301H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3409.0usft (HP 621)
Site:	Righteous 6 State Com	MD Reference:	KB= 25' @ 3409.0usft (HP 621)
Well:	#301H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
185.0	0.44	106.22	185.0	-0.2	0.7	0.24	0.24	0.00	-0.7	0.0
372.0	0.97	95.76	372.0	-0.6	2.9	0.29	0.28	-5.59	-3.0	-0.3
598.0	0.88	108.24	598.0	-1.3	6.5	0.10	-0.04	5.52	-6.6	0.8
772.0	1.85	109.50	771.9	-2.6	10.4	0.56	0.56	0.72	-10.7	1.0
910.0	2.20	93.39	909.8	-3.5	15.2	0.48	0.25	-11.67	-15.3	-2.6
1,131.0	1.93	101.12	1,130.7	-4.5	23.0	0.18	-0.12	3.50	-23.5	0.0
1,306.0	2.99	93.12	1,305.5	-5.3	30.5	0.64	0.61	-4.57	-30.7	-3.7
1,522.0	2.64	100.05	1,521.3	-6.5	41.0	0.23	-0.16	3.21	-41.5	0.7
1,698.0	2.73	94.69	1,697.1	-7.6	49.2	0.15	0.05	-3.05	-49.6	-3.5
1,813.0	3.25	100.58	1,811.9	-8.4	55.1	0.52	0.45	5.12	-55.7	1.9
1,951.0	3.50	78.70	1,949.7	-8.3	63.1	0.94	0.18	-15.86	-60.2	-20.5
2,137.0	4.20	22.30	2,135.3	-0.9	71.3	1.98	0.38	-30.32	-23.1	-65.5
2,331.0	6.90	26.80	2,328.4	16.1	79.2	1.41	1.39	2.32	-31.2	-60.7
2,520.0	9.10	26.80	2,515.5	39.6	91.1	1.16	1.16	0.00	-32.3	-57.0
2,706.0	9.20	29.00	2,699.2	65.7	104.9	0.20	0.05	1.18	-38.3	-52.5
2,898.0	9.80	31.80	2,888.5	93.0	121.0	0.39	0.31	1.46	-45.8	-48.3
3,081.0	10.20	28.60	3,068.8	120.5	136.9	0.37	0.22	-1.75	-49.6	-48.8
3,268.0	10.00	26.20	3,252.9	149.6	152.0	0.25	-0.11	-1.28	-54.7	-47.5
3,454.0	9.80	22.60	3,436.1	178.7	165.2	0.35	-0.11	-1.94	-58.3	-46.3
3,641.0	8.70	27.60	3,620.7	205.9	177.9	0.73	-0.59	2.67	-66.3	-36.4
3,829.0	7.90	29.40	3,806.7	229.8	190.8	0.45	-0.43	0.96	-68.5	-31.3
4,015.0	5.20	32.70	3,991.5	248.0	201.7	1.47	-1.45	1.77	-65.5	-25.6
4,202.0	5.50	28.90	4,177.6	263.0	210.6	0.25	0.16	-2.03	-55.1	-27.6
4,390.0	5.80	29.70	4,364.7	279.1	219.6	0.16	0.16	0.43	-47.9	-24.3
4,577.0	5.50	29.60	4,550.8	295.1	228.7	0.16	-0.16	-0.05	-40.3	-22.0
4,764.0	6.90	31.10	4,736.7	312.6	239.0	0.75	0.75	0.80	-35.1	-18.9

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #301H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3409.0usft (HP 621)
Site:	Righteous 6 State Com	MD Reference:	KB= 25' @ 3409.0usft (HP 621)
Well:	#301H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)	
4,950.0	6.90	33.00	4,921.4	331.5	250.8	0.12	0.00	1.02	-32.1	-16.4	
5,137.0	7.10	36.00	5,107.0	350.3	263.7	0.22	0.11	1.60	-29.7	-14.6	
5,324.0	7.30	37.70	5,292.5	369.0	277.8	0.16	0.11	0.91	-27.5	-14.6	
5,511.0	6.90	38.10	5,478.1	387.3	292.0	0.22	-0.21	0.21	-24.7	-15.8	
5,543.0	6.70	38.40	5,509.8	390.2	294.3	0.63	-0.62	0.94	-24.1	-15.9	
5,726.0	6.80	35.40	5,691.6	407.4	307.2	0.20	0.05	-1.64	-19.2	-17.9	
5,913.0	6.50	31.80	5,877.3	425.4	319.2	0.27	-0.16	-1.93	-13.7	-18.3	
6,099.0	6.10	33.40	6,062.2	442.6	330.2	0.23	-0.22	0.86	-8.7	-16.9	
6,286.0	7.00	27.00	6,248.0	461.1	340.9	0.62	0.48	-3.42	-2.2	-15.2	
6,471.0	7.70	33.80	6,431.5	481.4	352.9	0.60	0.38	3.68	-1.8	-13.0	
6,659.0	8.00	34.70	6,617.7	502.7	367.3	0.17	0.16	0.48	-1.5	-12.6	
6,847.0	7.90	33.80	6,803.9	524.2	382.0	0.08	-0.05	-0.48	-1.2	-12.3	
7,035.0	7.50	32.00	6,990.2	545.3	395.6	0.25	-0.21	-0.96	0.2	-11.3	
7,222.0	7.60	31.90	7,175.6	566.1	408.6	0.05	0.05	-0.05	1.6	-9.9	
7,410.0	6.40	32.30	7,362.2	585.6	420.8	0.64	-0.64	0.21	4.1	-8.7	
7,597.0	4.70	33.30	7,548.3	600.8	430.6	0.91	-0.91	0.53	1.8	-8.1	
7,784.0	0.50	22.20	7,735.1	607.9	435.1	2.25	-2.25	-5.94	-1.2	-8.2	
7,970.0	0.50	245.10	7,921.0	608.3	434.7	0.50	0.00	-73.71	6.2	4.6	
8,158.0	0.20	235.70	8,109.0	607.8	433.7	0.16	-0.16	-5.00	4.2	5.5	
8,346.0	0.20	81.10	8,297.0	607.7	433.7	0.21	0.00	-82.23	-6.2	-3.3	
8,534.0	0.30	82.60	8,485.0	607.8	434.5	0.05	0.05	0.80	-7.1	-3.1	
8,720.0	0.20	352.90	8,671.0	608.2	435.0	0.19	-0.05	-48.23	2.7	-7.6	
8,907.0	0.10	72.50	8,858.0	608.5	435.1	0.11	-0.05	42.57	-7.2	-3.7	
9,107.0	0.20	77.00	9,058.0	608.7	435.6	0.05	0.05	2.25	-8.0	-3.1	
9,201.0	4.60	160.40	9,151.9	605.2	437.0	4.87	4.68	88.72	-6.3	8.0	
9,248.0	11.80	161.40	9,198.4	598.8	439.2	15.32	15.32	2.13	-7.5	8.8	
9,294.0	16.30	168.00	9,243.0	588.0	442.0	10.37	9.78	14.35	-8.6	10.3	

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Righteous 6 State Com
 Well: #301H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #301H
 TVD Reference: KB= 25' @ 3409.0usft (HP 621)
 MD Reference: KB= 25' @ 3409.0usft (HP 621)
 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)
9,341.0	19.00	172.70	9,287.8	574.0	444.4	6.49	5.74	10.00	-9.1	10.6
9,388.0	22.20	173.20	9,331.8	557.6	446.4	6.82	6.81	1.06	-8.9	9.4
9,435.0	27.40	173.70	9,374.5	538.0	448.6	11.07	11.06	1.06	-8.3	7.8
9,482.0	32.60	170.60	9,415.2	514.8	451.9	11.54	11.06	-6.60	-8.4	6.0
9,529.0	38.50	167.50	9,453.4	488.0	457.1	13.12	12.55	-6.60	-9.0	5.5
9,574.0	43.20	166.40	9,487.4	459.3	463.8	10.57	10.44	-2.44	-9.9	6.3
9,621.0	48.50	167.60	9,520.1	426.4	471.4	11.42	11.28	2.55	-11.0	7.5
9,667.0	52.50	171.60	9,549.4	391.5	477.7	10.98	8.70	8.70	-11.6	7.4
9,714.0	56.60	174.40	9,576.7	353.6	482.4	9.98	8.72	5.96	-12.0	4.8
9,737.2	59.07	174.97	9,589.0	334.0	484.2	10.85	10.65	2.45	-12.2	2.8
HL Crossing, MD:9737.2', TVD:9589.0',N/S:334.0', E/W:484.2', INC:59.07										
9,760.0	61.50	175.50	9,600.3	314.3	485.8	10.85	10.66	2.33	-12.4	0.6
9,807.0	67.90	174.40	9,620.4	272.0	489.6	13.78	13.62	-2.34	-13.6	-4.1
9,854.0	71.80	173.20	9,636.6	228.1	494.4	8.64	8.30	-2.55	-15.2	-7.8
9,901.0	75.20	174.20	9,649.9	183.3	499.3	7.52	7.23	2.13	-17.0	-9.8
9,948.0	79.00	176.00	9,660.4	137.7	503.2	8.91	8.09	3.83	-19.0	-11.6
9,995.0	81.60	177.20	9,668.3	91.4	505.9	6.08	5.53	2.55	-20.7	-13.2
10,041.0	82.00	177.30	9,674.9	46.0	508.1	0.90	0.87	0.22	-20.7	-14.1
10,088.0	86.70	178.40	9,679.5	-0.8	509.9	10.27	10.00	2.34	-19.9	-14.2
10,132.0	86.90	178.70	9,682.0	-44.7	511.0	0.82	0.45	0.68	-18.6	-13.6
10,226.0	88.60	178.80	9,685.7	-138.6	513.0	1.81	1.81	0.11	-16.0	-12.2
10,318.0	84.40	179.20	9,691.3	-230.4	514.6	4.59	-4.57	0.43	-11.5	-11.3
10,412.0	87.20	179.80	9,698.2	-324.1	515.5	3.05	2.98	0.64	-5.7	-11.1
10,505.0	91.10	180.80	9,699.5	-417.1	515.0	4.33	4.19	1.08	-5.4	-12.2
10,599.0	89.00	179.30	9,699.5	-511.1	514.9	2.75	-2.23	-1.60	-6.6	-13.0
10,693.0	87.80	178.30	9,702.1	-605.0	516.9	1.66	-1.28	-1.06	-5.1	-11.6
10,786.0	88.30	177.90	9,705.3	-697.9	519.9	0.69	0.54	-0.43	-3.1	-9.2

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #301H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3409.0usft (HP 621)
Site:	Righteous 6 State Com	MD Reference:	KB= 25' @ 3409.0usft (HP 621)
Well:	#301H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)
10,879.0	89.10	178.40	9,707.4	-790.8	522.9	1.01	0.86	0.54	-2.1	-6.8
10,972.0	90.90	178.30	9,707.4	-883.8	525.6	1.94	1.94	-0.11	-3.2	-4.8
11,065.0	90.40	179.60	9,706.3	-976.8	527.3	1.50	-0.54	1.40	-5.3	-3.8
11,159.0	87.70	179.20	9,707.9	-1,070.7	528.3	2.90	-2.87	-0.43	-4.9	-3.4
11,252.0	87.10	178.50	9,712.1	-1,163.6	530.2	0.99	-0.65	-0.75	-1.8	-2.2
11,345.0	85.60	178.40	9,718.0	-1,256.4	532.7	1.62	-1.61	-0.11	3.1	-0.3
11,439.0	87.50	178.90	9,723.7	-1,350.2	534.9	2.09	2.02	0.53	7.3	1.2
11,532.0	91.10	179.40	9,724.8	-1,443.2	536.3	3.91	3.87	0.54	7.0	2.0
11,626.0	93.50	179.50	9,721.0	-1,537.1	537.2	2.56	2.55	0.11	1.7	2.2
11,720.0	92.40	181.10	9,716.2	-1,630.9	536.7	2.06	-1.17	1.70	-4.6	1.1
11,814.0	89.40	182.70	9,714.7	-1,724.9	533.6	3.62	-3.19	1.70	-7.5	-2.7
11,908.0	86.90	181.10	9,717.7	-1,818.8	530.5	3.16	-2.66	-1.70	-6.0	-6.5
12,002.0	88.40	180.70	9,721.6	-1,912.7	529.0	1.65	1.60	-0.43	-3.6	-8.6
12,096.0	90.60	180.60	9,722.4	-2,006.6	527.9	2.34	2.34	-0.11	-4.3	-10.3
12,190.0	89.50	179.50	9,722.3	-2,100.6	527.8	1.65	-1.17	-1.17	-5.8	-11.0
12,283.0	89.70	178.80	9,723.0	-2,193.6	529.2	0.78	0.22	-0.75	-6.6	-10.3
12,376.0	89.20	177.90	9,723.9	-2,286.6	531.9	1.11	-0.54	-0.97	-7.2	-8.3
12,470.0	90.80	177.80	9,723.9	-2,380.5	535.4	1.71	1.70	-0.11	-8.7	-5.4
12,564.0	93.80	177.90	9,720.1	-2,474.4	538.9	3.19	3.19	0.11	-13.9	-2.5
12,657.0	92.00	179.00	9,715.4	-2,567.2	541.4	2.27	-1.94	1.18	-20.1	-0.7
12,750.0	88.80	180.70	9,714.8	-2,660.2	541.7	3.90	-3.44	1.83	-22.2	-1.0
12,844.0	86.90	181.40	9,718.3	-2,754.1	540.0	2.15	-2.02	0.74	-20.1	-3.4
12,937.0	86.80	181.00	9,723.4	-2,846.9	538.0	0.44	-0.11	-0.43	-16.5	-6.0
13,031.0	88.30	180.60	9,727.4	-2,940.8	536.7	1.65	1.60	-0.43	-13.9	-8.0
13,125.0	88.30	180.30	9,730.2	-3,034.8	536.0	0.32	0.00	-0.32	-12.6	-9.4
13,219.0	89.60	180.40	9,731.9	-3,128.8	535.4	1.39	1.38	0.11	-12.4	-10.6
13,312.0	90.20	179.40	9,732.1	-3,221.8	535.6	1.25	0.65	-1.08	-13.6	-11.1

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Righteous 6 State Com
Well: #301H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #301H
TVD Reference: KB= 25' @ 3409.0usft (HP 621)
MD Reference: KB= 25' @ 3409.0usft (HP 621)
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)
13,405.0	89.20	179.10	9,732.6	-3,314.8	536.8	1.12	-1.08	-0.32	-14.6	-10.5
13,499.0	89.50	179.20	9,733.6	-3,408.7	538.2	0.34	0.32	0.11	-15.0	-9.7
13,592.0	89.10	180.20	9,734.8	-3,501.7	538.7	1.16	-0.43	1.08	-15.3	-9.9
13,685.0	89.60	180.60	9,735.8	-3,594.7	538.0	0.69	0.54	0.43	-15.7	-11.2
13,778.0	90.10	180.30	9,736.1	-3,687.7	537.3	0.63	0.54	-0.32	-16.9	-12.6
13,872.0	87.10	179.70	9,738.4	-3,781.7	537.3	3.25	-3.19	-0.64	-16.1	-13.2
13,966.0	86.90	179.40	9,743.3	-3,875.6	538.0	0.38	-0.21	-0.32	-12.6	-13.1
14,059.0	90.20	179.90	9,745.6	-3,968.5	538.6	3.59	3.55	0.54	-11.7	-13.2
14,152.0	87.90	178.90	9,747.2	-4,061.5	539.6	2.70	-2.47	-1.08	-11.6	-12.9
14,246.0	87.30	177.70	9,751.1	-4,155.4	542.3	1.43	-0.64	-1.28	-9.1	-10.8
14,340.0	86.40	176.90	9,756.3	-4,249.1	546.8	1.28	-0.96	-0.85	-5.4	-7.0
14,433.0	91.40	177.60	9,758.1	-4,342.0	551.2	5.43	5.38	0.75	-5.0	-3.2
14,527.0	91.60	178.80	9,755.6	-4,435.9	554.2	1.29	0.21	1.28	-8.9	-0.9
14,621.0	89.80	179.40	9,754.5	-4,529.9	555.7	2.02	-1.91	0.64	-11.5	0.0
14,715.0	89.50	179.40	9,755.0	-4,623.8	556.6	0.32	-0.32	0.00	-12.3	0.3
14,808.0	89.60	178.40	9,755.8	-4,716.8	558.4	1.08	0.11	-1.08	-13.0	1.4
14,902.0	90.40	177.60	9,755.8	-4,810.8	561.7	1.20	0.85	-0.85	-14.4	4.1
14,995.0	91.20	177.40	9,754.5	-4,903.7	565.8	0.89	0.86	-0.22	-17.1	7.5
15,088.0	91.60	179.80	9,752.2	-4,996.6	568.0	2.62	0.43	2.58	-20.7	9.1
15,182.0	93.20	180.30	9,748.3	-5,090.5	567.9	1.78	1.70	0.53	-26.0	8.4
15,275.0	86.60	182.10	9,748.4	-5,183.4	566.0	7.36	-7.10	1.94	-27.3	5.8
15,369.0	86.90	182.50	9,753.7	-5,277.2	562.2	0.53	0.32	0.43	-23.3	1.4
15,462.0	88.10	181.50	9,757.8	-5,370.0	559.0	1.68	1.29	-1.08	-20.6	-2.5
15,555.0	89.90	181.70	9,759.4	-5,463.0	556.4	1.95	1.94	0.22	-20.4	-5.7
15,649.0	88.40	181.70	9,760.8	-5,556.9	553.6	1.60	-1.60	0.00	-20.4	-9.2
15,741.0	88.00	180.80	9,763.7	-5,648.9	551.6	1.07	-0.43	-0.98	-18.8	-11.8
15,834.0	86.40	179.80	9,768.3	-5,741.7	551.1	2.03	-1.72	-1.08	-15.6	-13.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #301H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3409.0usft (HP 621)
Site:	Righteous 6 State Com	MD Reference:	KB= 25' @ 3409.0usft (HP 621)
Well:	#301H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)	
15,928.0	86.60	179.30	9,774.0	-5,835.6	551.9	0.57	0.21	-0.53	-11.2	-12.9	
16,021.0	90.10	179.00	9,776.7	-5,928.5	553.2	3.78	3.76	-0.32	-9.9	-12.1	
16,114.0	86.90	179.90	9,779.1	-6,021.4	554.1	3.57	-3.44	0.97	-8.8	-11.9	
16,207.0	88.90	180.20	9,782.5	-6,114.4	554.0	2.17	2.15	0.32	-6.7	-12.6	
16,300.0	86.90	179.70	9,785.9	-6,207.3	554.1	2.22	-2.15	-0.54	-4.6	-13.2	
16,393.0	87.30	179.50	9,790.6	-6,300.2	554.8	0.48	0.43	-0.22	-1.2	-13.2	
16,486.0	88.90	178.80	9,793.7	-6,393.2	556.2	1.88	1.72	-0.75	0.5	-12.4	
16,580.0	90.90	178.20	9,793.9	-6,487.1	558.6	2.22	2.13	-0.64	-0.6	-10.6	
16,673.0	89.50	178.30	9,793.5	-6,580.1	561.5	1.51	-1.51	0.11	-2.2	-8.4	
16,766.0	91.20	177.70	9,793.0	-6,673.0	564.7	1.94	1.83	-0.65	-4.1	-5.8	
16,859.0	90.60	177.20	9,791.5	-6,765.9	568.8	0.84	-0.65	-0.54	-6.9	-2.3	
16,953.0	87.80	176.60	9,792.8	-6,859.8	573.9	3.05	-2.98	-0.64	-6.8	2.1	
Final MWD Survey (MD=16953.0')											
17,015.0	87.80	176.60	9,795.2	-6,921.6	577.6	0.00	0.00	0.00	-5.3	5.3	
Final Projection to Bit (MD=17015.0')											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,737.2	9,589.0	334.0	484.2	HL Crossing, MD:9737.2', TVD:9589.0', N/S:334.0', E/W:484.2', INC:59.07
16,953.0	9,792.8	-6,859.8	573.9	Final MWD Survey (MD=16953.0')
17,015.0	9,795.2	-6,921.6	577.6	Final Projection to Bit (MD=17015.0')

Checked By: _____ Approved By: _____ Date: _____