

HOBBS OCD
OCT 20 2017
RECEIVED



Lea County, NM (NAD 83 NME)

Ares 4 State #201H

HP 620

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: #201H

KB= 25' @ 3604.0usft (HP 620) 3579.0
Northing 452430.00 Easting 776093.00 Latitude 32° 14' 29.468 N Longitude 103° 34' 26.547 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Deg	TFace	V/Sect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0		
3	1400.0	8.00	218.00	1398.7	-22.0	-17.2	2.00	218.00	-18.9		
4	5036.7	8.00	218.00	5000.0	-420.8	-328.8	0.00	0.00	-362.1		
5	9136.7	10.00	218.00	9088.8	-433.1	-338.4	2.00	0.00	-372.7		
6	7016.7	10.00	218.00	6950.2	-480.4	-538.4	0.00	0.00	-594.0		
7	7516.7	0.00	0.00	7447.7	-724.7	-566.2	2.00	180.00	-423.6		
8	9556.1	0.00	0.00	9499.1	-724.7	-566.2	0.00	0.00	-423.6		
9	10148.8	71.00	347.81	9840.8	-409.9	-634.2	12.00	347.81	-301.9		
10	10432.0	90.44	359.53	9896.0	-134.8	-463.9	8.00	31.92	-25.7		
11	10432.0	90.44	359.53	9896.0	-134.8	-463.9	0.00	0.00	-25.7		
12	11874.8	90.43	359.53	9975.0	1307.9	-475.7	0.00	-180.00	1400.0		LP (Ares 4 State 201H)
13	11900.5	90.95	359.53	9974.7	1333.6	-475.9	2.00	0.00	1425.4		TGT 1 (Ares 4 State 201H)
14	13393.1	90.95	359.53	9950.0	2825.9	-488.2	0.00	0.00	2900.0		TGT 2 (Ares 4 State 201H)
15	13399.3	91.07	359.53	9948.9	2832.1	-488.2	2.00	0.00	2906.1		
16	14837.5	91.07	359.53	9923.0	4270.0	-700.0	0.00	0.00	4327.0		PBHL (Ares 4 State 201H)



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.54°
Magnetic Field
Strength: 47932.5nT
Dip Angle: 60.08°
Date: 8/8/2017
Model: IGRF2015

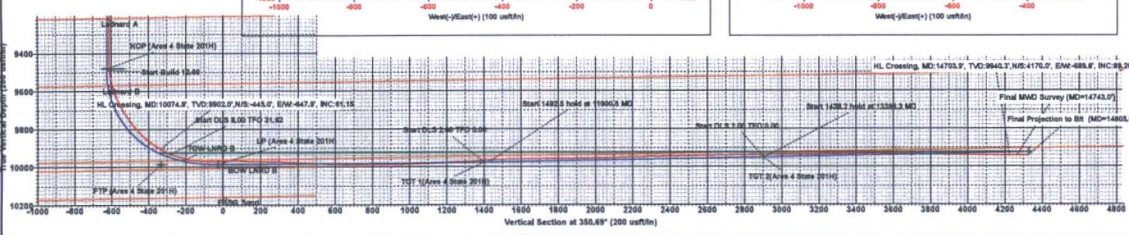
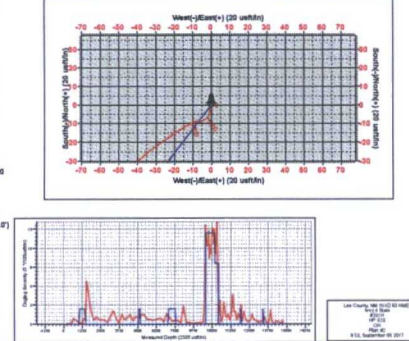
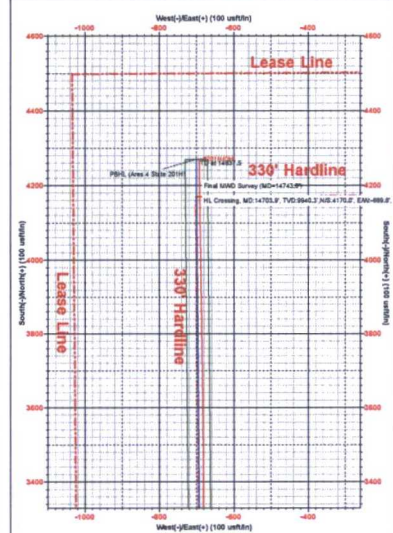
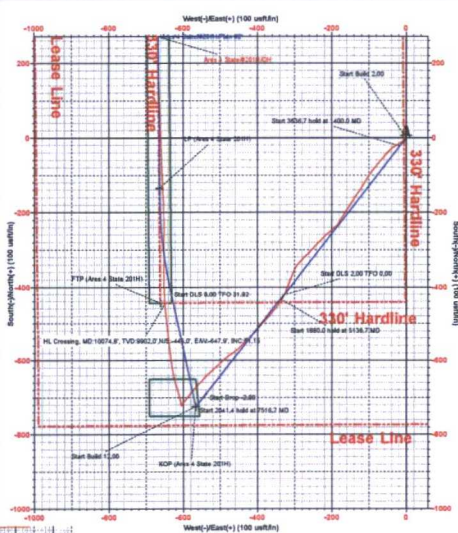
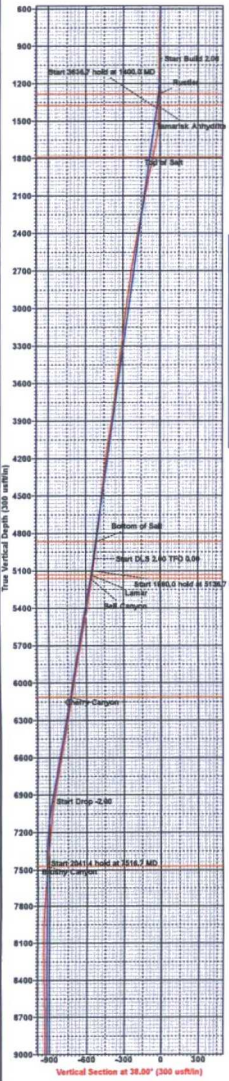
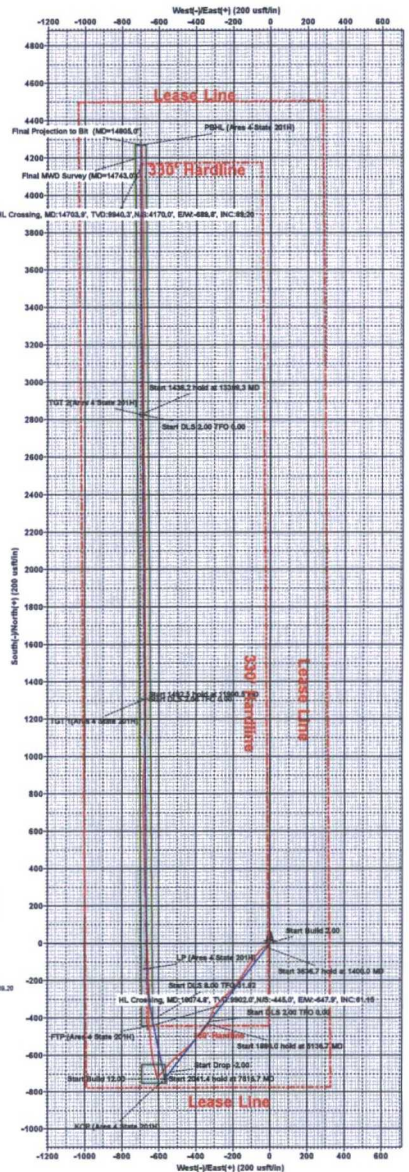
To convert a Magnetic Direction to a Grid Direction, Add 6.54°
To convert a Magnetic Direction to a True Direction, Add 6.54° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/S	+E/W	Northing	Easting
LP (Ares 4 State 201H)	9986.0	-134.8	-463.9	452295.18	775429.13
TGT 1 (Ares 4 State 201H)	9975.0	1307.9	-475.7	453737.90	775417.30
TGT 2 (Ares 4 State 201H)	9950.0	2825.9	-488.2	455255.90	775404.85
PBHL (Ares 4 State 201H)	9923.0	4270.0	-700.0	456700.00	775383.00
FTP (Ares 4 State 201H)	9986.0	-448.0	-461.0	451865.00	775432.00
KOP (Ares 4 State 201H)	9480.5	-724.7	-566.2	451705.32	775526.82



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Ares 4 State

#201H

OH

Design: OH

PVA Report

06 September, 2017

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #201H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3604.0usft (HP 620)
Site:	Ares 4 State	MD Reference:	KB= 25' @ 3604.0usft (HP 620)
Well:	#201H	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		Ares 4 State				
Site Position:		Northing:	451,993.00	usft	Latitude:	32° 14' 25.072 N
From:	Map	Easting:	777,413.00	usft	Longitude:	103° 34' 11.215 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16	"	Grid Convergence:	0.41 °

Well	#201H					
Well Position	+N/-S	0.0 usft	Northing:	452,430.00 usft	Latitude:	32° 14' 29.488 N
	+E/-W	0.0 usft	Easting:	776,093.00 usft	Longitude:	103° 34' 26.547 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,579.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/8/2017	6.94	60.08	47,932.52841563

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)	Direction (°)
	0.0	0.0	0.0	350.69

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #201H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3604.0usft (HP 620)
Site:	Ares 4 State	MD Reference:	KB= 25' @ 3604.0usft (HP 620)
Well:	#201H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date 9/6/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
564.0	1,293.0	Invictus MWD (OH)	MWD	MWD - Standard
1,382.0	14,805.0	Intrepid MWD (OH)	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
564.0	0.90	189.96	564.0	-4.4	-0.8	0.16	0.16	0.00	-4.4	0.0
658.0	0.20	178.96	658.0	-5.3	-0.9	0.75	-0.74	-11.70	-5.2	-1.0
1,131.0	0.60	233.96	1,131.0	-7.5	-2.9	0.11	0.08	11.63	-3.9	3.6
1,293.0	0.90	239.96	1,292.9	-8.7	-4.7	0.19	0.19	3.70	5.5	-0.4
1,382.0	0.97	281.73	1,381.9	-8.9	-6.0	0.75	0.08	46.93	7.2	-12.9
1,477.0	1.41	270.92	1,476.9	-8.7	-8.0	0.52	0.46	-11.38	15.5	-22.0
1,571.0	6.46	238.57	1,570.7	-11.4	-13.6	5.66	5.37	-34.41	30.9	-15.4
1,666.0	10.81	236.81	1,664.6	-19.1	-25.7	4.59	4.58	-1.85	29.6	-18.9
1,856.0	12.22	220.38	1,850.8	-44.2	-53.6	1.87	0.74	-8.65	22.7	-16.0
2,045.0	11.21	220.91	2,035.9	-73.3	-78.6	0.54	-0.53	0.28	10.3	-17.4
2,234.0	11.47	212.20	2,221.2	-103.1	-100.6	0.92	0.14	-4.61	1.8	-15.7
2,424.0	10.33	212.82	2,407.7	-133.4	-119.9	0.60	-0.60	0.33	-8.0	-13.2
2,613.0	9.27	213.17	2,594.0	-160.4	-137.5	0.56	-0.56	0.19	-14.1	-10.8
2,802.0	8.22	213.61	2,780.8	-184.4	-153.3	0.56	-0.56	0.23	-16.8	-8.6
2,992.0	7.87	211.94	2,968.9	-206.7	-167.7	0.22	-0.18	-0.88	-16.8	-6.6
3,181.0	5.89	212.12	3,156.5	-225.9	-179.7	1.05	-1.05	0.10	-13.2	-3.9
3,370.0	8.53	228.82	3,344.1	-243.4	-195.4	1.77	1.40	8.84	-11.3	-2.1
3,560.0	7.12	226.79	3,532.3	-260.7	-214.6	0.76	-0.74	-1.07	-10.9	-7.0
3,749.0	6.99	226.09	3,719.8	-276.7	-231.4	0.08	-0.07	-0.37	-7.9	-11.0
3,939.0	9.45	222.84	3,907.9	-296.2	-250.3	1.32	1.29	-1.71	-8.1	-14.3

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ares 4 State
Well: #201H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #201H
TVD Reference: KB= 25' @ 3604.0usft (HP 620)
MD Reference: KB= 25' @ 3604.0usft (HP 620)
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)	
4,128.0	8.31	224.33	4,094.6	-317.3	-270.4	0.62	-0.60	0.79	-11.5	-16.6	
4,317.0	6.81	223.01	4,282.0	-335.3	-287.6	0.80	-0.79	-0.70	-9.8	-19.5	
4,506.0	6.99	203.15	4,469.6	-354.0	-299.8	1.26	0.10	-10.51	0.7	-18.7	
4,696.0	6.20	202.36	4,658.4	-374.2	-308.2	0.42	-0.42	-0.42	4.7	-11.7	
4,885.0	8.18	201.75	4,845.9	-396.1	-317.1	1.05	1.05	-0.32	6.4	-4.4	
5,048.0	6.86	200.51	5,007.5	-416.0	-324.8	0.82	-0.81	-0.76	6.9	2.3	
5,275.0	9.14	212.73	5,232.3	-443.8	-339.3	1.25	1.00	5.38	13.7	7.2	
5,465.0	10.73	223.01	5,419.4	-469.5	-359.5	1.25	0.84	5.41	15.1	4.4	
5,654.0	9.71	220.38	5,605.4	-494.5	-381.9	0.59	-0.54	-1.39	14.2	3.0	
5,843.0	10.77	223.54	5,791.4	-519.4	-404.3	0.63	0.56	1.67	13.4	-0.1	
6,032.0	9.85	222.40	5,977.4	-544.2	-427.4	0.50	-0.49	-0.60	12.3	-2.7	
6,221.0	9.36	228.38	6,163.7	-566.3	-449.8	0.59	-0.26	3.16	12.8	-8.2	
6,411.0	10.24	234.35	6,350.9	-586.4	-475.1	0.71	0.46	3.14	11.3	-17.1	
6,600.0	10.73	226.62	6,536.8	-608.3	-501.5	0.79	0.26	-4.09	11.7	-22.7	
6,790.0	10.24	226.53	6,723.6	-632.1	-526.6	0.26	-0.26	-0.05	9.7	-27.6	
6,979.0	7.78	221.96	6,910.3	-653.1	-547.4	1.35	-1.30	-2.42	15.1	-30.3	
7,168.0	6.24	221.43	7,097.9	-670.4	-562.7	0.82	-0.81	-0.28	21.5	-32.1	
7,357.0	5.54	220.64	7,285.9	-685.0	-575.5	0.37	-0.37	-0.42	19.5	-32.7	
7,547.0	4.66	219.41	7,475.1	-697.9	-586.3	0.47	-0.46	-0.65	7.9	-32.6	
7,736.0	3.82	216.42	7,663.6	-708.9	-595.0	0.46	-0.44	-1.58	-4.4	-32.5	
7,925.0	3.56	213.43	7,852.2	-718.9	-601.9	0.17	-0.14	-1.58	-14.8	-33.0	
8,115.0	0.84	34.40	8,042.1	-722.6	-604.4	2.32	-1.43	-94.23	19.9	32.7	
8,304.0	0.92	14.98	8,231.1	-720.0	-603.2	0.16	0.04	-10.28	5.1	37.0	
8,499.0	0.44	14.80	8,426.1	-717.8	-602.6	0.25	-0.25	-0.09	2.6	37.0	
8,688.0	0.35	30.36	8,615.1	-716.6	-602.1	0.07	-0.05	8.23	11.2	35.1	
8,877.0	0.18	64.11	8,804.0	-716.0	-601.6	0.12	-0.09	17.86	28.0	23.3	
9,067.0	0.18	232.51	8,994.0	-716.0	-601.5	0.19	0.00	88.63	-22.8	-28.4	

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Ares 4 State
 Well: #201H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #201H
 TVD Reference: KB= 25' @ 3604.0usft (HP 620)
 MD Reference: KB= 25' @ 3604.0usft (HP 620)
 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)
9,256.0	0.40	274.34	9,183.0	-716.1	-602.4	0.15	0.12	22.13	-36.8	-5.8
9,444.0	0.48	204.12	9,371.0	-716.8	-603.4	0.27	0.04	-37.35	-8.0	-37.2
9,512.0	2.15	272.58	9,439.0	-717.0	-604.8	2.98	2.46	100.68	-38.9	-5.9
9,560.0	6.24	353.44	9,486.9	-714.4	-606.0	13.06	8.52	168.46	-14.7	38.4
9,606.0	11.74	350.90	9,532.3	-707.3	-607.0	11.98	11.96	-5.52	-21.5	37.5
9,655.0	16.97	344.66	9,579.8	-695.4	-609.7	11.12	10.67	-12.73	-30.3	34.9
9,701.0	21.71	344.22	9,623.2	-680.8	-613.8	10.31	10.30	-0.96	-34.4	35.4
9,749.0	26.68	344.13	9,666.9	-661.9	-619.2	10.35	10.35	-0.19	-37.4	36.4
9,795.0	31.91	348.52	9,707.1	-640.0	-624.4	12.28	11.37	9.54	-36.9	39.5
9,844.0	36.04	350.37	9,747.7	-613.1	-629.4	8.69	8.43	3.78	-36.9	39.6
9,890.0	40.18	352.30	9,783.9	-585.0	-633.7	9.36	9.00	4.20	-35.2	38.6
9,939.0	44.62	353.80	9,820.0	-552.2	-637.6	9.29	9.06	3.06	-32.4	35.9
9,985.0	49.93	354.50	9,851.2	-518.6	-641.1	11.60	11.54	1.52	-29.3	31.9
10,033.0	55.96	354.41	9,880.2	-480.5	-644.8	12.56	12.56	-0.19	-26.1	26.9
10,074.8	61.15	355.51	9,902.0	-445.0	-647.9	12.63	12.42	2.63	-23.1	22.2
HL Crossing, MD:10074.8', TVD:9902.0', N/S:-445.0', E/W:-647.9', INC:61.15										
10,080.0	61.80	355.64	9,904.4	-440.4	-648.3	12.63	12.44	2.48	-22.7	21.6
10,128.0	66.33	358.19	9,925.4	-397.4	-650.6	10.58	9.44	5.31	-18.6	14.5
10,175.0	71.87	0.30	9,942.2	-353.5	-651.1	12.51	11.79	4.49	-15.3	6.7
10,223.0	76.88	1.09	9,955.1	-307.3	-650.6	10.56	10.44	1.65	-13.7	-0.9
10,270.0	81.19	0.39	9,964.1	-261.1	-650.0	9.29	9.17	-1.49	-13.1	-7.0
10,317.0	86.46	358.54	9,969.1	-214.4	-650.4	11.88	11.21	-3.94	-13.6	-10.5
10,361.0	92.22	357.22	9,969.6	-170.5	-652.0	13.43	13.09	-3.00	-15.9	-11.1
10,455.0	91.12	357.40	9,966.9	-76.6	-656.4	1.19	-1.17	0.19	-18.7	-7.9
10,550.0	88.22	358.10	9,967.4	18.3	-660.2	3.14	-3.05	0.74	-17.4	-5.0
10,644.0	88.22	357.84	9,970.3	112.2	-663.5	0.28	0.00	-0.28	-13.8	-2.4
10,739.0	89.10	357.58	9,972.6	207.1	-667.3	0.97	0.93	-0.27	-10.8	0.6

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #201H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3604.0usft (HP 620)
Site:	Ares 4 State	MD Reference:	KB= 25' @ 3604.0usft (HP 620)
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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)	
10,834.0	86.51	358.28	9,976.2	301.9	-670.7	2.82	-2.73	0.74	-6.4	3.3	
10,928.0	87.47	358.19	9,981.1	395.8	-673.6	1.03	1.02	-0.10	-0.8	5.4	
11,023.0	88.26	358.19	9,984.7	490.7	-676.6	0.83	0.83	0.00	3.5	7.6	
11,116.0	89.45	358.54	9,986.5	583.6	-679.3	1.33	1.28	0.38	6.0	9.5	
11,210.0	89.98	358.54	9,987.0	677.6	-681.7	0.56	0.56	0.00	7.2	11.1	
11,305.0	89.45	359.42	9,987.5	772.5	-683.3	1.08	-0.56	0.93	8.4	12.0	
11,400.0	92.09	1.97	9,986.2	867.5	-682.2	3.86	2.78	2.68	7.8	10.1	
11,494.0	92.66	3.38	9,982.3	961.3	-677.8	1.62	0.61	1.50	4.7	5.0	
11,589.0	92.35	1.79	9,978.1	1,056.1	-673.5	1.70	-0.33	-1.67	1.2	-0.1	
11,684.0	92.79	1.62	9,973.9	1,151.0	-670.7	0.50	0.46	-0.18	-2.3	-3.7	
11,778.0	92.84	0.30	9,969.3	1,244.9	-669.1	1.40	0.05	-1.40	-6.2	-6.1	
11,873.0	93.58	0.21	9,964.0	1,339.7	-668.7	0.78	0.78	-0.09	-10.6	-7.3	
11,968.0	91.34	359.33	9,959.9	1,434.6	-669.1	2.53	-2.36	-0.93	-13.1	-7.6	
12,062.0	91.56	358.98	9,957.5	1,528.6	-670.5	0.44	0.23	-0.37	-14.0	-7.0	
12,157.0	90.02	359.25	9,956.2	1,623.6	-672.0	1.65	-1.62	0.28	-13.7	-6.3	
12,252.0	90.81	359.51	9,955.5	1,718.6	-673.0	0.88	0.83	0.27	-12.8	-6.1	
12,346.0	90.90	359.95	9,954.1	1,812.5	-673.4	0.48	0.10	0.47	-12.7	-6.4	
12,441.0	91.16	0.04	9,952.4	1,907.5	-673.4	0.29	0.27	0.09	-12.8	-7.2	
12,535.0	91.12	0.30	9,950.5	2,001.5	-673.2	0.28	-0.04	0.28	-13.1	-8.2	
12,630.0	91.69	0.21	9,948.2	2,096.5	-672.7	0.61	0.60	-0.09	-13.9	-9.4	
12,724.0	90.64	359.51	9,946.3	2,190.5	-673.0	1.34	-1.12	-0.74	-14.2	-10.0	
12,819.0	91.30	359.42	9,944.7	2,285.4	-673.8	0.70	0.69	-0.09	-14.3	-9.9	
12,913.0	90.86	359.33	9,942.9	2,379.4	-674.9	0.48	-0.47	-0.10	-14.5	-9.6	
13,008.0	91.12	358.98	9,941.3	2,474.4	-676.3	0.46	0.27	-0.37	-14.6	-9.0	
13,103.0	91.25	358.89	9,939.3	2,569.4	-678.0	0.17	0.14	-0.09	-15.0	-8.0	
13,197.0	91.03	359.16	9,937.4	2,663.3	-679.6	0.37	-0.23	0.29	-15.3	-7.2	
13,292.0	90.86	359.33	9,935.9	2,758.3	-680.9	0.25	-0.18	0.18	-15.3	-6.7	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #201H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3604.0usft (HP 620)
Site:	Ares 4 State	MD Reference:	KB= 25' @ 3604.0usft (HP 620)
Well:	#201H	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)	
13,387.0	90.46	359.07	9,934.8	2,853.3	-682.2	0.50	-0.42	-0.27	-14.7	-6.2	
13,481.0	90.55	359.68	9,933.9	2,947.3	-683.2	0.66	0.10	0.65	-13.8	-5.9	
13,576.0	90.33	0.48	9,933.2	3,042.3	-683.1	0.87	-0.23	0.84	-12.8	-6.8	
13,671.0	90.42	0.65	9,932.6	3,137.3	-682.2	0.20	0.09	0.18	-11.6	-8.5	
13,765.0	90.68	0.65	9,931.7	3,231.3	-681.1	0.28	0.28	0.00	-10.7	-10.4	
13,860.0	90.90	0.65	9,930.4	3,326.2	-680.0	0.23	0.23	0.00	-10.3	-12.2	
13,955.0	89.76	359.33	9,929.8	3,421.2	-680.0	1.84	-1.20	-1.39	-9.1	-13.0	
14,049.0	89.32	359.25	9,930.6	3,515.2	-681.2	0.48	-0.47	-0.09	-6.5	-12.6	
14,144.0	89.23	359.25	9,931.8	3,610.2	-682.5	0.09	-0.09	0.00	-3.6	-12.1	
14,239.0	89.19	359.25	9,933.1	3,705.2	-683.7	0.04	-0.04	0.00	-0.5	-11.7	
14,334.0	88.84	359.51	9,934.7	3,800.2	-684.7	0.46	-0.37	0.27	2.9	-11.4	
14,428.0	88.97	359.25	9,936.5	3,894.1	-685.7	0.31	0.14	-0.28	6.5	-11.2	
14,523.0	89.23	359.16	9,938.0	3,989.1	-687.1	0.29	0.27	-0.09	9.8	-10.6	
14,618.0	89.36	359.16	9,939.2	4,084.1	-688.4	0.14	0.14	0.00	12.7	-10.0	
14,703.9	89.20	359.08	9,940.3	4,170.0	-689.8	0.20	-0.18	-0.10	15.4	-9.4	
HL Crossing, MD:14703.9', TVD:9940.3', N/S:4170.0', E/W:-689.8', INC:89.20											
14,712.0	89.19	359.07	9,940.4	4,178.1	-689.9	0.20	-0.18	-0.10	15.6	-9.3	
14,743.0	89.32	359.16	9,940.8	4,209.1	-690.4	0.51	0.42	0.29	16.6	-9.1	
Final MWD Survey (MD=14743.0')											
14,805.0	89.32	359.16	9,941.5	4,271.1	-691.3	0.00	0.00	0.00	18.5	-8.7	
Final Projection to Bit (MD=14805.0')											

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #201H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3604.0usft (HP 620)
Site:	Ares 4 State	MD Reference:	KB= 25' @ 3604.0usft (HP 620)
Well:	#201H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,074.8	9,902.0	-445.0	-647.9	HL Crossing, MD:10074.8', TVD:9902.0', N/S:-445.0', E/W:-647.9', INC:61.15
14,703.9	9,940.3	4,170.0	-689.8	HL Crossing, MD:14703.9', TVD:9940.3', N/S:4170.0', E/W:-689.8', INC:89.20
14,743.0	9,940.8	4,209.1	-690.4	Final MWD Survey (MD=14743.0')
14,805.0	9,941.5	4,271.1	-691.3	Final Projection to Bit (MD=14805.0')

Checked By: _____	Approved By: _____	Date: _____
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