



HOBBS OCD
FEB 22 2018
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Lea County, NM (NAD 27 NME)
Audacious BTL 19 Fed Com #4H

HP 653

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

WELL DETAILS: #4H

Ground Level: 3436.0
KB = 25' @ 3461.0usft (HP 653)
Northing: 406621.00
Easting: 725357.00
Latitude: 32° 6' 56.971 N
Longitude: 103° 36' 19.638 W

Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.62°

Magnetic Field
Strength: 47913.8nT
Dip Angle: 55.96°
Date: 1/13/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.62°
To convert a Magnetic Direction to a True Direction, Add 7.01° East
To convert a True Direction to a Grid Direction, Subtract 0.39°

SECTION DETAILS

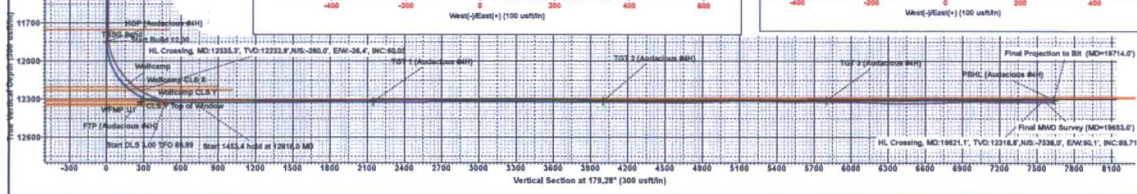
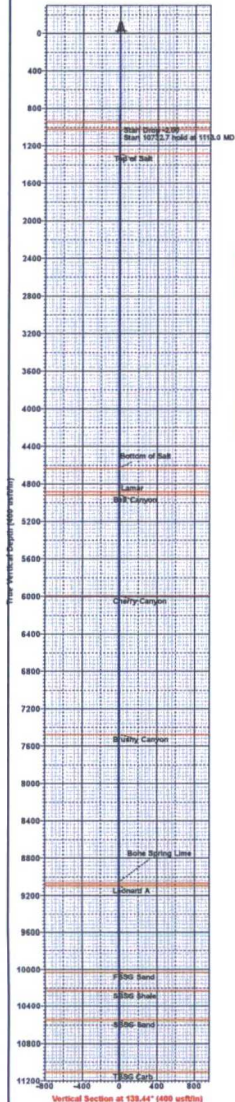
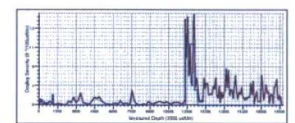
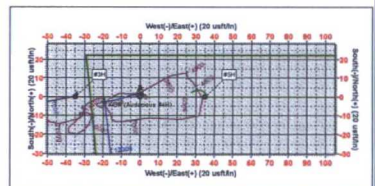
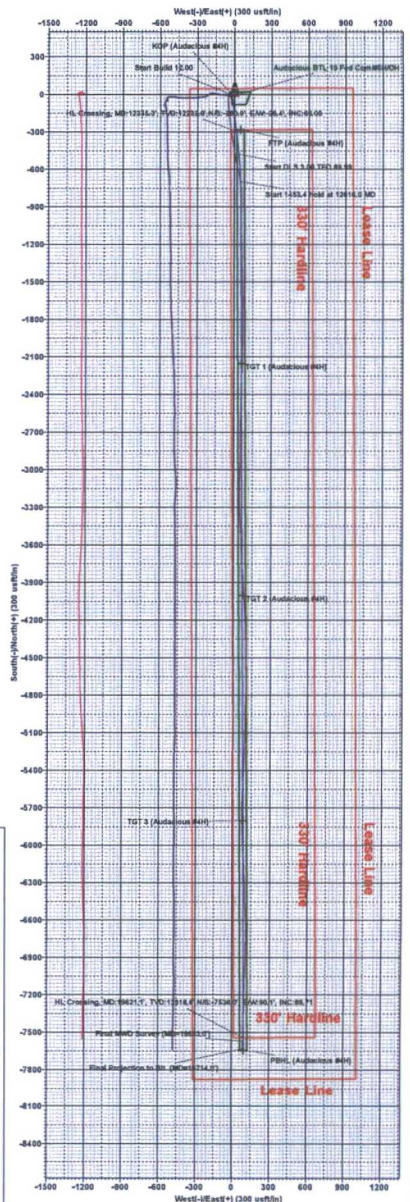
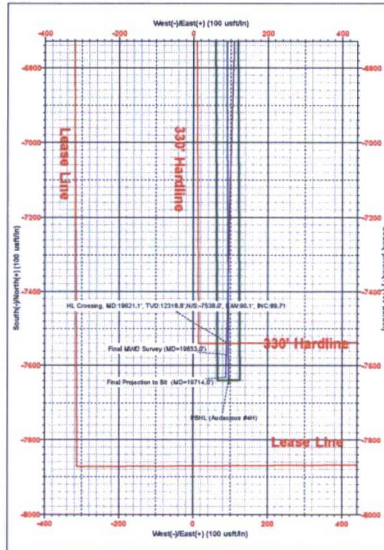
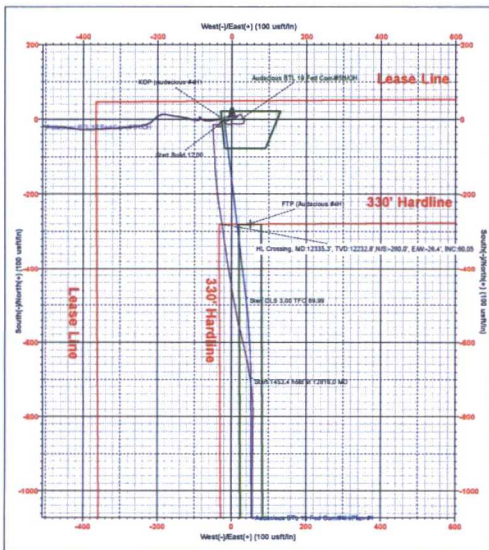
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target
1	1033.0	1.60	263.30	1032.8	-2.2	-18.0	0.00	0.00	2.0	
2	1113.0	0.00	0.00	1112.8	-2.3	-19.1	2.00	180.00	2.1	
3	11845.7	0.00	0.00	11845.5	-2.3	-19.1	0.00	0.00	2.1	
4	12597.2	90.17	173.08	12323.0	-477.7	38.6	12.00	173.08	478.2	
5	12816.0	90.17	179.64	12322.3	-696.0	52.5	3.00	89.99	696.6	
6	14269.4	90.17	179.64	12318.0	-2149.4	61.5	0.00	0.00	2150.0	TGT 1 (Audacious #4H)
7	16119.5	90.14	179.64	12313.0	-3999.4	73.1	0.00	-164.08	4000.0	TGT 2 (Audacious #4H)
8	17919.5	90.18	179.64	12308.0	-5799.4	84.4	0.00	12.53	5800.0	TGT 3 (Audacious #4H)
9	19758.1	90.13	179.64	12303.0	-7638.0	96.0	0.00	-169.26	7638.6	PBHL (Audacious #4H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
KOP (Audacious #4H)	11845.5	-2.3	-19.1	406618.65	725337.92
PBHL (Audacious #4H)	12303.0	-7638.0	96.0	398963.00	725453.00
TGT 3 (Audacious #4H)	12308.0	-5799.4	84.4	400821.60	725441.45
TGT 2 (Audacious #4H)	12313.0	-3999.4	73.1	402821.80	725430.14
TGT 1 (Audacious #4H)	12318.0	-2149.4	61.5	404471.60	725418.51
FTP (Audacious #4H)	12323.0	-7638.0	96.0	405342.00	725467.00



EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Audacious BTL 19 Fed Com

#4H

OH

Design: OH

PVA Report

29 November, 2017

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #4H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3461.0usft (HP 653)
Site:	Audacious BTL 19 Fed Com	MD Reference:	KB = 25' @ 3461.0usft (HP 653)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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	Audacious BTL 19 Fed Com				
Site Position:		Northing:	406,621.00 usft	Latitude:	32° 6' 56.974 N
From:	Map	Easting:	725,322.00 usft	Longitude:	103° 36' 20.045 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#4H					
Well Position	+N/-S	0.0 usft	Northing:	406,621.00 usft	Latitude:	32° 6' 56.971 N
	+E/-W	0.0 usft	Easting:	725,357.00 usft	Longitude:	103° 36' 19.638 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,436.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/13/2017	7.01	59.96	47,913.76174376

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	179.28	

Survey Program	Date 11/29/2017				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
117.0	19,714.0	Intrepid MWD (OH)	MWD	MWD - Standard	

PVA Report

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 Project: Lea County, NM (NAD 27 NME)
 Site: Audacious BTL 19 Fed Com
 Well: #4H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #4H
 TVD Reference: KB = 25' @ 3461.0usft (HP 653)
 MD Reference: KB = 25' @ 3461.0usft (HP 653)
 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
117.0	0.90	306.50	117.0	0.5	-0.7	0.77	0.77	0.00	0.0	0.0
306.0	0.50	274.70	306.0	1.5	-2.8	0.29	-0.21	-16.83	0.0	0.0
496.0	0.70	250.30	496.0	1.2	-4.7	0.17	0.11	-12.84	0.0	0.0
681.0	1.10	250.60	680.9	0.2	-7.4	0.22	0.22	0.16	0.0	0.0
867.0	2.20	256.70	866.9	-1.2	-12.6	0.60	0.59	3.28	0.0	0.0
1,033.0	1.60	263.30	1,032.8	-2.2	-18.0	0.38	-0.36	3.98	0.0	0.0
1,205.0	1.50	247.90	1,204.7	-3.3	-22.4	0.25	-0.06	-8.95	-3.5	-0.3
1,389.0	0.70	104.50	1,388.7	-4.5	-23.6	1.14	-0.43	-77.93	3.8	-3.2
1,574.0	0.40	132.20	1,573.7	-5.2	-22.0	0.21	-0.16	14.97	0.2	-4.1
1,764.0	0.40	102.10	1,763.7	-5.8	-20.9	0.11	0.00	-15.84	1.0	-3.8
1,954.0	0.30	32.60	1,953.7	-5.6	-20.0	0.21	-0.05	-36.58	3.2	-1.0
2,144.0	0.70	42.80	2,143.7	-4.3	-18.9	0.21	0.21	5.37	1.3	-1.4
2,334.0	0.10	24.90	2,333.7	-3.3	-18.0	0.32	-0.32	-9.42	0.4	-1.3
2,524.0	1.80	27.90	2,523.6	-0.5	-16.6	0.89	0.89	1.58	-2.8	-1.3
2,714.0	2.50	89.10	2,713.5	2.2	-11.0	1.19	0.37	32.21	-8.1	4.4
2,904.0	1.00	105.00	2,903.4	1.8	-5.3	0.82	-0.79	8.37	-12.2	7.6
3,094.0	1.70	69.00	3,093.4	2.4	-1.1	0.56	0.37	-18.95	-18.5	-2.0
3,283.0	2.80	60.90	3,282.2	5.7	5.6	0.60	0.58	-4.29	-25.5	-5.0
3,473.0	2.70	62.10	3,472.0	10.0	13.6	0.06	-0.05	0.63	-34.7	-4.4
3,663.0	0.70	94.20	3,661.9	12.0	18.7	1.13	-1.05	16.89	-36.6	17.1
3,853.0	1.80	73.00	3,851.9	12.8	22.7	0.62	0.58	-11.16	-44.4	2.3
4,043.0	0.60	203.50	4,041.8	12.8	25.2	1.18	-0.63	68.68	31.5	34.6
4,234.0	0.80	151.40	4,232.8	10.7	25.4	0.34	0.10	-27.28	-9.9	45.3
4,424.0	1.70	123.30	4,422.8	8.0	28.4	0.56	0.47	-14.79	-34.0	34.7
4,614.0	4.60	158.20	4,612.5	-0.6	33.6	1.76	1.53	18.37	-17.9	49.6
4,804.0	3.00	246.00	4,802.2	-9.7	31.9	2.84	-0.84	46.21	43.5	27.5

PVA Report

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 Project: Lea County, NM (NAD 27 NME)
 Site: Audacious BTL 19 Fed Com
 Well: #4H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #4H
 TVD Reference: KB = 25' @ 3461.0usft (HP 653)
 MD Reference: KB = 25' @ 3461.0usft (HP 653)
 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)	
4,994.0	3.20	271.40	4,991.9	-11.6	22.0	0.72	0.11	13.37	41.3	8.3	
5,183.0	3.30	273.70	5,180.6	-11.2	11.3	0.09	0.05	1.22	30.9	6.8	
5,373.0	2.00	262.20	5,370.4	-11.2	2.6	0.74	-0.68	-6.05	20.3	11.8	
5,563.0	1.60	261.70	5,560.3	-12.1	-3.3	0.21	-0.21	-0.26	14.2	11.9	
5,753.0	1.80	263.40	5,750.2	-12.8	-8.9	0.11	0.11	0.89	8.9	11.6	
5,943.0	0.90	280.90	5,940.2	-12.9	-13.3	0.52	-0.47	9.21	7.6	9.2	
6,133.0	0.40	339.00	6,130.2	-12.0	-15.0	0.40	-0.26	30.58	10.4	-0.3	
6,323.0	0.50	340.70	6,320.2	-10.6	-15.5	0.05	0.05	0.89	8.9	-0.6	
6,513.0	0.70	339.20	6,510.2	-8.7	-16.2	0.11	0.11	-0.79	7.0	-0.4	
6,703.0	0.90	319.90	6,700.1	-6.5	-17.6	0.18	0.11	-10.16	4.1	1.5	
6,893.0	0.60	358.40	6,890.1	-4.3	-18.6	0.30	-0.16	20.26	2.0	-0.4	
7,083.0	0.70	350.20	7,080.1	-2.2	-18.8	0.07	0.05	-4.32	-0.1	-0.3	
7,273.0	0.40	308.40	7,270.1	-0.6	-19.5	0.25	-0.16	-22.00	-1.4	-1.1	
7,462.0	0.90	265.50	7,459.1	-0.3	-21.5	0.35	0.26	-22.70	-2.3	-2.2	
7,653.0	1.40	242.80	7,650.1	-1.5	-25.1	0.35	0.26	-11.88	-5.0	-3.5	
7,843.0	1.80	234.10	7,840.0	-4.3	-29.6	0.25	0.21	-4.58	-9.7	-4.5	
8,033.0	0.20	58.70	8,030.0	-5.9	-31.7	1.05	-0.84	-92.32	12.7	3.5	
8,223.0	0.60	123.90	8,219.9	-6.3	-30.6	0.29	0.21	34.32	7.4	-9.7	
8,413.0	0.70	191.70	8,409.9	-8.0	-30.0	0.38	0.05	35.68	-7.8	-9.6	
8,603.0	0.40	82.60	8,599.9	-9.0	-29.6	0.48	-0.16	-57.42	11.3	-5.3	
8,793.0	0.60	281.80	8,789.9	-8.8	-29.9	0.52	0.11	-84.63	-9.3	8.5	
8,983.0	2.50	223.20	8,979.9	-11.6	-33.7	1.18	1.00	-30.84	-16.8	-4.4	
9,173.0	1.30	240.00	9,169.8	-15.7	-38.4	0.69	-0.63	8.84	-23.4	1.9	
9,353.0	1.50	144.50	9,349.7	-18.6	-38.8	1.15	0.11	-53.06	-1.8	-25.5	
9,543.0	1.80	69.60	9,539.7	-19.6	-34.6	1.06	0.16	-39.42	20.5	-10.8	
9,733.0	1.10	52.60	9,729.6	-17.5	-30.3	0.43	-0.37	-8.95	18.1	-5.2	
9,923.0	1.10	29.70	9,919.6	-14.8	-28.0	0.23	0.00	-12.05	15.2	1.6	

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Audacious BTL 19 Fed Com
 Well: #4H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #4H
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Survey										
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10,112.0	0.90	18.80	10,108.5	-11.8	-26.6	0.15	-0.11	-5.77	11.4	4.1
10,303.0	0.50	355.10	10,299.5	-9.5	-26.2	0.25	-0.21	-12.41	6.5	7.7
10,493.0	1.20	279.70	10,489.5	-8.4	-28.2	0.62	0.37	-39.68	-8.0	7.5
10,682.0	1.00	258.30	10,678.5	-8.4	-31.8	0.24	-0.11	-11.32	-13.7	3.3
10,872.0	0.30	78.80	10,868.5	-8.6	-32.9	0.68	-0.37	-94.47	14.8	-3.5
11,063.0	0.80	144.20	11,059.5	-9.6	-31.7	0.38	0.26	34.24	1.5	-14.4
11,253.0	2.40	255.60	11,249.4	-11.7	-34.7	1.47	0.84	58.63	-17.5	5.1
11,443.0	1.80	256.10	11,439.3	-13.4	-41.5	0.32	-0.32	0.26	-24.4	5.3
11,536.0	1.60	261.20	11,532.2	-13.9	-44.2	0.27	-0.22	5.48	-26.6	7.6
11,708.0	1.70	302.70	11,704.2	-12.9	-48.7	0.68	0.06	24.13	-19.2	24.9
11,803.0	1.10	302.90	11,799.1	-11.6	-50.7	0.63	-0.63	0.21	-21.5	25.0
11,850.0	6.00	182.00	11,846.1	-13.9	-51.1	14.11	10.43	-257.23	-12.6	-31.6
11,898.0	15.60	177.00	11,893.1	-22.8	-50.9	20.08	20.00	-10.42	-16.1	-33.1
11,945.0	21.10	177.40	11,937.7	-37.6	-50.2	11.71	11.70	0.85	-24.1	-33.6
11,993.0	24.60	175.60	11,982.0	-56.2	-49.0	7.43	7.29	-3.75	-29.9	-35.1
12,040.0	29.70	175.40	12,023.8	-77.6	-47.3	10.85	10.85	-0.43	-35.1	-35.9
12,088.0	34.40	177.40	12,064.4	-103.0	-45.7	10.04	9.79	4.17	-40.6	-36.1
12,135.0	38.90	177.70	12,102.1	-131.0	-44.6	9.58	9.57	0.64	-43.7	-38.1
12,183.0	42.90	174.60	12,138.4	-162.4	-42.4	9.34	8.33	-6.46	-43.4	-41.6
12,230.0	48.30	172.00	12,171.3	-195.7	-38.5	12.15	11.49	-5.53	-42.2	-43.1
12,278.0	53.40	172.10	12,201.6	-232.5	-33.3	10.63	10.62	0.21	-41.6	-42.3
12,325.0	59.30	171.40	12,227.6	-271.2	-27.7	12.61	12.55	-1.49	-40.1	-41.5
12,335.3	60.05	171.42	12,232.8	-280.0	-26.4	7.29	7.29	0.21	-39.7	-41.3
HL Crossing, MD:12335.3', TVD:12232.8', N/S:-280.0', E/W:-26.4', INC:60.05										
12,373.0	62.80	171.50	12,250.9	-312.8	-21.4	7.29	7.29	0.21	-37.5	-40.2
12,420.0	66.50	171.40	12,271.0	-354.8	-15.1	7.87	7.87	-0.21	-32.9	-39.0
12,468.0	72.40	171.10	12,287.8	-399.2	-8.3	12.31	12.29	-0.62	-27.1	-37.4

PVA Report

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12,515.0	78.20	171.10	12,299.7	-444.1	-1.3	12.34	12.34	0.00	-21.4	-35.7	
12,563.0	86.00	169.20	12,306.3	-490.9	6.9	16.72	16.25	-3.96	-16.5	-33.1	
12,658.0	95.20	165.50	12,305.3	-583.4	27.6	10.44	9.68	-3.89	-17.7	-20.5	
12,753.0	90.00	170.00	12,301.0	-676.1	47.8	7.23	-5.47	4.74	-21.4	-4.4	
12,876.0	90.80	179.90	12,300.2	-798.5	58.6	8.07	0.65	8.05	-21.8	5.4	
12,971.0	89.80	181.30	12,299.7	-893.5	57.6	1.81	-1.05	1.47	-22.1	3.9	
13,066.0	89.60	180.70	12,300.2	-988.5	55.9	0.67	-0.21	-0.63	-21.3	1.6	
13,161.0	87.70	179.00	12,302.4	-1,083.4	56.2	2.68	-2.00	-1.79	-18.8	1.3	
13,256.0	87.40	178.50	12,306.5	-1,178.3	58.2	0.61	-0.32	-0.53	-14.4	2.8	
13,351.0	89.20	179.10	12,309.3	-1,273.3	60.2	2.00	1.89	0.63	-11.3	4.2	
13,446.0	89.20	178.70	12,310.6	-1,368.2	62.0	0.42	0.00	-0.42	-9.7	5.4	
13,541.0	90.10	178.50	12,311.2	-1,463.2	64.4	0.97	0.95	-0.21	-8.8	7.1	
13,636.0	88.10	177.80	12,312.7	-1,558.1	67.4	2.23	-2.11	-0.74	-7.1	9.6	
13,731.0	91.50	179.60	12,313.0	-1,653.1	69.6	4.05	3.58	1.89	-6.5	11.2	
13,826.0	92.40	180.20	12,309.8	-1,748.0	69.8	1.14	0.95	0.63	-9.4	10.7	
13,921.0	89.50	179.50	12,308.2	-1,843.0	70.0	3.14	-3.05	-0.74	-10.7	10.4	
14,016.0	92.00	180.20	12,307.0	-1,938.0	70.3	2.73	2.63	0.74	-11.7	10.1	
14,111.0	89.20	180.30	12,306.0	-2,033.0	69.8	2.95	-2.95	0.11	-12.4	9.0	
14,206.0	89.50	180.60	12,307.0	-2,128.0	69.1	0.45	0.32	0.32	-11.0	7.7	
14,301.0	92.00	182.40	12,305.8	-2,222.9	66.6	3.24	2.63	1.89	-12.0	4.6	
14,396.0	90.40	182.50	12,303.8	-2,317.8	62.5	1.69	-1.68	0.11	-13.7	0.0	
14,491.0	89.60	181.90	12,303.8	-2,412.7	58.9	1.05	-0.84	-0.63	-13.4	-4.2	
14,586.0	90.10	180.90	12,304.1	-2,507.7	56.6	1.18	0.53	-1.05	-12.9	-7.2	
14,681.0	89.30	181.00	12,304.6	-2,602.7	55.0	0.85	-0.84	0.11	-12.1	-9.3	
14,776.0	88.30	181.20	12,306.6	-2,697.6	53.2	1.07	-1.05	0.21	-9.9	-11.7	
14,871.0	88.20	180.70	12,309.5	-2,792.6	51.6	0.54	-0.11	-0.53	-6.7	-13.9	
14,966.0	88.90	180.40	12,311.9	-2,887.5	50.7	0.80	0.74	-0.32	-4.0	-15.4	

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Audacious BTL 19 Fed Com
 Well: #4H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #4H
 TVD Reference: KB = 25' @ 3461.0usft (HP 653)
 MD Reference: KB = 25' @ 3461.0usft (HP 653)
 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)
15,061.0	88.80	181.00	12,313.8	-2,982.5	49.5	0.64	-0.11	0.63	-1.9	-17.2
15,156.0	89.50	181.50	12,315.2	-3,077.5	47.5	0.91	0.74	0.53	-0.2	-19.8
15,251.0	90.40	180.80	12,315.3	-3,172.5	45.6	1.20	0.95	-0.74	0.1	-22.4
15,346.0	90.50	178.50	12,314.5	-3,267.5	46.1	2.42	0.11	-2.42	-0.4	-22.4
15,441.0	90.20	176.80	12,313.9	-3,362.4	50.0	1.82	-0.32	-1.79	-0.7	-19.1
15,536.0	87.80	176.40	12,315.6	-3,457.2	55.7	2.56	-2.53	-0.42	1.3	-14.0
15,631.0	91.90	177.80	12,315.8	-3,552.0	60.5	4.56	4.32	1.47	1.7	-9.8
15,726.0	87.00	177.30	12,316.7	-3,646.9	64.5	5.18	-5.16	-0.53	2.9	-6.4
15,821.0	89.40	177.20	12,319.7	-3,741.8	69.1	2.53	2.53	-0.11	6.1	-2.4
15,916.0	90.50	177.10	12,319.8	-3,836.6	73.8	1.16	1.16	-0.11	6.4	1.7
16,011.0	92.40	176.60	12,317.4	-3,931.5	79.0	2.07	2.00	-0.53	4.3	6.3
16,106.0	88.90	175.20	12,316.3	-4,026.2	85.8	3.97	-3.68	-1.47	3.4	12.5
16,201.0	89.10	175.80	12,318.0	-4,120.9	93.3	0.67	0.21	0.63	5.3	19.4
16,296.0	88.40	177.40	12,320.1	-4,215.7	98.9	1.84	-0.74	1.68	7.6	24.4
16,391.0	90.80	179.20	12,320.7	-4,310.6	101.7	3.16	2.53	1.89	8.5	26.6
16,486.0	89.30	178.10	12,320.6	-4,405.6	104.0	1.96	-1.58	-1.16	8.7	28.2
16,581.0	89.20	181.00	12,321.9	-4,500.6	104.7	3.05	-0.11	3.05	10.2	28.4
16,676.0	89.00	180.20	12,323.4	-4,595.6	103.7	0.87	-0.21	-0.84	11.9	26.8
16,769.0	90.70	179.30	12,323.6	-4,688.6	104.1	2.07	1.83	-0.97	12.4	26.6
16,864.0	93.60	181.30	12,320.1	-4,783.5	103.6	3.71	3.05	2.11	9.0	25.5
16,959.0	91.20	180.70	12,316.1	-4,878.4	102.0	2.60	-2.53	-0.63	5.4	23.3
17,054.0	92.10	180.40	12,313.3	-4,973.3	101.1	1.00	0.95	-0.32	2.9	21.8
17,149.0	91.70	180.60	12,310.2	-5,068.3	100.2	0.47	-0.42	0.21	0.0	20.3
17,244.0	89.40	182.50	12,309.3	-5,163.2	97.7	3.14	-2.42	2.00	-0.6	17.2
17,339.0	87.60	183.10	12,311.8	-5,258.1	93.0	2.00	-1.89	0.63	2.2	11.9
17,434.0	88.00	182.70	12,315.4	-5,352.9	88.2	0.60	0.42	-0.42	6.1	6.5
17,529.0	89.10	181.70	12,317.8	-5,447.8	84.6	1.56	1.16	-1.05	8.7	2.3

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Audacious BTL 19 Fed Com
 Well: #4H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #4H
 TVD Reference: KB = 25' @ 3461.0usft (HP 653)
 MD Reference: KB = 25' @ 3461.0usft (HP 653)
 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)
17,624.0	90.50	182.50	12,318.2	-5,542.7	81.1	1.70	1.47	0.84	9.4	-1.8
17,719.0	90.10	183.00	12,317.7	-5,637.6	76.5	0.67	-0.42	0.53	9.2	-6.9
17,814.0	89.40	179.70	12,318.1	-5,732.6	74.3	3.55	-0.74	-3.47	9.9	-9.7
17,909.0	89.70	178.60	12,318.8	-5,827.5	75.7	1.20	0.32	-1.16	10.9	-8.9
18,004.0	90.10	178.00	12,319.0	-5,922.5	78.5	0.76	0.42	-0.63	11.4	-6.7
18,099.0	89.50	177.80	12,319.3	-6,017.4	82.0	0.67	-0.63	-0.21	12.0	-3.8
18,194.0	88.30	176.40	12,321.1	-6,112.3	86.8	1.94	-1.26	-1.47	14.1	0.4
18,289.0	86.90	176.80	12,325.1	-6,207.0	92.4	1.53	-1.47	0.42	18.3	5.5
18,384.0	89.50	178.50	12,328.1	-6,301.9	96.3	3.27	2.74	1.79	21.6	8.7
18,479.0	89.40	178.90	12,329.0	-6,396.9	98.5	0.43	-0.11	0.42	22.8	10.3
18,574.0	90.30	178.50	12,329.3	-6,491.8	100.6	1.04	0.95	-0.42	23.3	11.9
18,669.0	90.50	176.30	12,328.6	-6,586.7	104.9	2.33	0.21	-2.32	22.9	15.6
18,764.0	93.50	179.21	12,325.3	-6,681.6	108.7	4.40	3.16	3.06	19.9	18.7
18,859.0	93.30	181.20	12,319.6	-6,776.4	108.3	2.10	-0.21	2.09	14.5	17.8
19,049.0	90.20	181.90	12,313.8	-6,966.2	103.2	1.67	-1.63	0.37	9.2	11.4
19,144.0	87.90	181.60	12,315.4	-7,061.2	100.3	2.44	-2.42	-0.32	11.0	7.9
19,239.0	87.50	180.70	12,319.2	-7,156.1	98.4	1.04	-0.42	-0.95	15.1	5.4
19,334.0	91.10	181.70	12,320.4	-7,251.0	96.4	3.93	3.79	1.05	16.5	2.8
19,429.0	90.50	180.40	12,319.1	-7,346.0	94.7	1.51	-0.63	-1.37	15.4	0.5
19,523.0	90.10	181.50	12,318.6	-7,440.0	93.1	1.25	-0.43	1.17	15.1	-1.6
19,619.0	89.70	182.00	12,318.7	-7,535.9	90.2	0.67	-0.42	0.52	15.5	-5.2
19,621.1	89.71	181.95	12,318.8	-7,538.0	90.1	2.37	0.29	-2.35	15.5	-5.3
HL Crossing, MD:19621.1', TVD:12318.8', N/S:-7538.0', E/W:90.1', INC:89.71										
19,653.0	89.80	181.20	12,318.9	-7,569.9	89.2	2.37	0.29	-2.35	15.7	-6.4
Final MWD Survey (MD=19653.0')										
19,714.0	89.80	181.20	12,319.1	-7,630.9	87.9	0.00	0.00	0.00	16.1	-8.0
Final Projection to Bit (MD=19714.0')										

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #4H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3461.0usft (HP 653)
Site:	Audacious BTL 19 Fed Com	MD Reference:	KB = 25' @ 3461.0usft (HP 653)
Well:	#4H	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)	
12,335.3	12,232.8	-280.0	-26.4	HL Crossing, MD:12335.3', TVD:12232.8',N/S:-280.0', E/W:-26.4', INC:60.05
19,621.1	12,318.8	-7,538.0	90.1	HL Crossing, MD:19621.1', TVD:12318.8',N/S:-7538.0', E/W:90.1', INC:89.71
19,653.0	12,318.9	-7,569.9	89.2	Final MWD Survey (MD=19653.0')
19,714.0	12,319.1	-7,630.9	87.9	Final Projection to Bit (MD=19714.0')

Checked By: _____	Approved By: _____	Date: _____
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