



Lea County, NM (NAD 83 NME)

Andele 16 State Com

#703H

HP 647

Plan #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



Azimuths to Grid North
 True North: -0.45°
 Magnetic North: 6.44°
 Magnetic Field
 Strength: 47878.4nT
 Dip Angle: 55.58°
 Date: 7/24/2017
 Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.44°
 To convert a Magnetic Direction to a True Direction, Add 6.89° East
 To convert a True Direction to a Grid Direction, Subtract 0.45°

WELL DETAILS: #703H

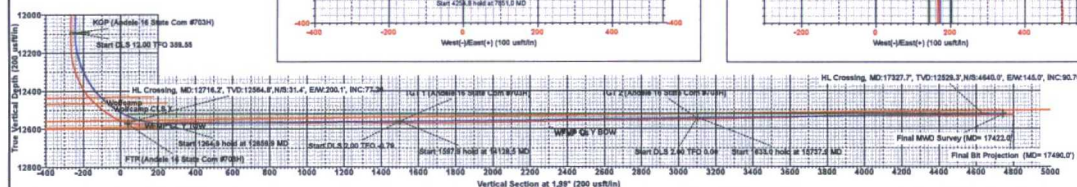
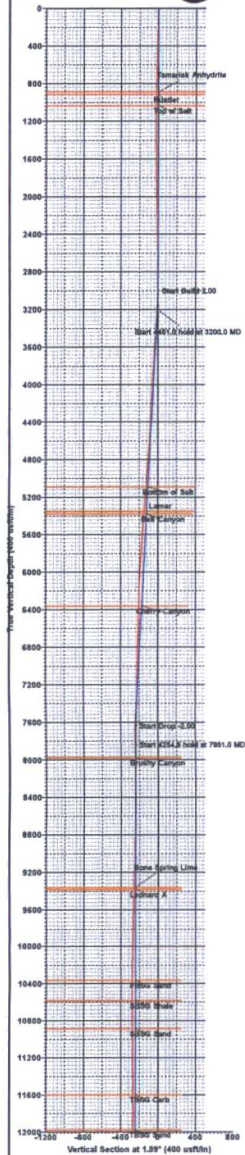
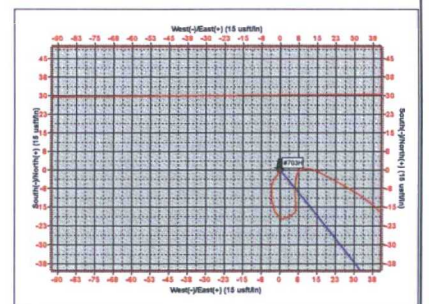
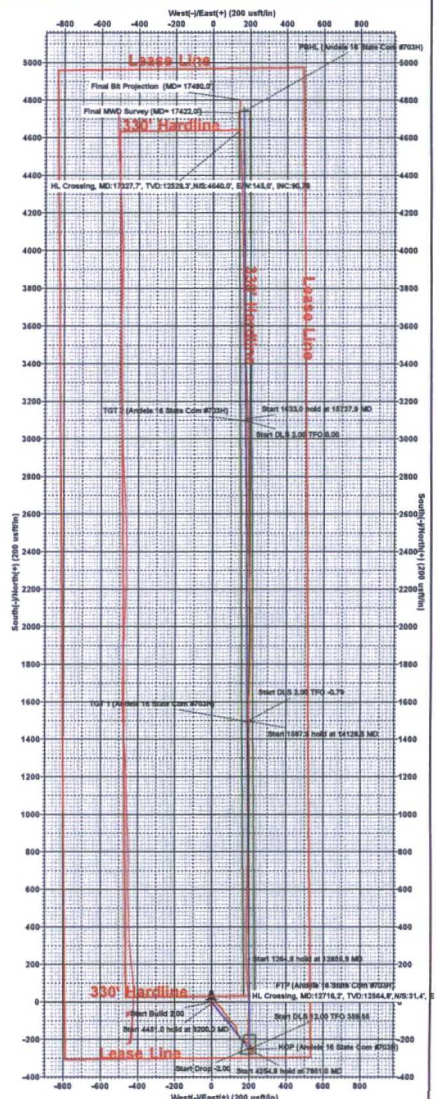
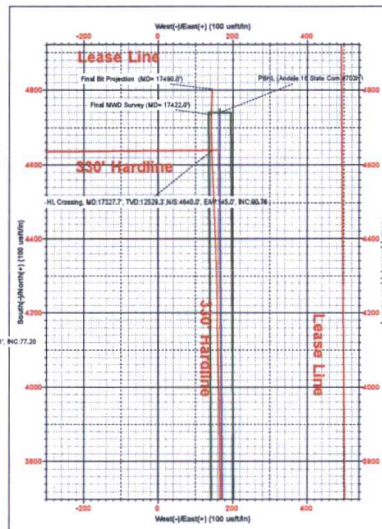
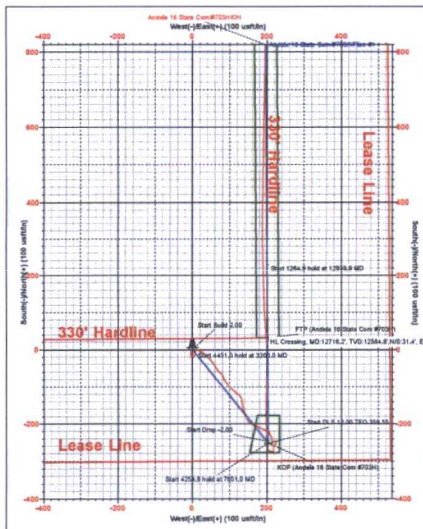
3353.0
 KB = 25' @ 3378.0m (HP 647)
 Easting 805232.00 32° 7' 28.755 N
 Longitude 103° 28' 51.210 W
 Slot

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3200.0	4.00	141.00	3199.8	-5.4	4.4	2.00	141.00	-5.3	
4	7851.0	4.00	141.00	7840.0	-246.7	199.8	0.00	0.00	-239.6	
5	7851.0	0.00	0.00	7839.8	-252.1	204.2	2.00	180.00	-244.9	
6	12105.8	0.00	0.00	12094.6	-252.1	204.2	0.00	0.00	-244.9	
7	12859.9	90.50	359.55	12572.0	229.5	200.4	12.00	359.55	236.3	
8	14124.8	90.50	359.55	12561.0	1494.3	190.5	0.00	0.00	1500.0	TGT 1 (Andele 16 State Com #703H)
9	14128.5	90.57	359.55	12561.0	1497.9	190.5	2.00	-0.79	1503.6	
10	15726.4	90.57	359.55	12545.0	3095.7	177.9	0.00	0.00	3100.0	TGT 2 (Andele 16 State Com #703H)
11	15737.9	90.80	359.55	12544.9	3107.2	177.8	2.00	0.00	3111.5	
12	17370.9	90.80	359.55	12522.0	4740.0	165.0	0.00	0.00	4742.9	PBHL (Andele 16 State Com #703H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
KOP (Andele 16 State Com #703H)	12094.6	-252.1	204.2	408674.86	805436.18	Polygon
PBHL (Andele 16 State Com #703H)	12522.0	4740.0	165.0	414667.00	805397.00	Rectangle (Sides: L:0.0 W:60.0)
TGT 2 (Andele 16 State Com #703H)	12545.0	3095.7	177.9	413022.70	805409.91	Point
TGT 1 (Andele 16 State Com #703H)	12561.0	1494.3	190.5	411421.30	805422.48	Point
FTP (Andele 16 State Com #703H)	12572.0	32.0	202.0	409959.00	805434.00	Point



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HOBBS OCD

EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Andele 16 State Com

#703H

OH

Design: OH

PVA Report

28 August, 2017

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3378.0usft (HP 647)
Site:	Andele 16 State Com	MD Reference:	KB = 25' @ 3378.0usft (HP 647)
Well:	#703H	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	Andele 16 State Com		
Site Position:		Northing:	409,927.00 usft
From:	Map	Easting:	805,232.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 26.755 N
		Longitude:	103° 28' 51.210 W
		Grid Convergence:	0.45 °

Well		#703H				
Well Position	+N/-S	0.0 usft	Northing:	409,927.00 usft	Latitude:	32° 7' 26.755 N
	+E/-W	0.0 usft	Easting:	805,232.00 usft	Longitude:	103° 28' 51.210 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,353.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/24/2017	6.89	59.98	47,878.37298710

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	1.99

Survey Program		Date 8/28/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
159.0	17,490.0	Intrepid MWD (OH)	MWD	MWD - Standard

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3378.0usft (HP 647)
Site:	Andele 16 State Com	MD Reference:	KB = 25' @ 3378.0usft (HP 647)
Well:	#703H	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
159.0	1.60	206.45	159.0	-2.0	-1.0	1.01	1.01	0.00	-2.2	0.0
220.0	1.50	225.45	220.0	-3.3	-1.9	0.85	-0.16	31.15	-3.7	1.0
277.0	1.40	190.45	276.9	-4.5	-2.6	1.54	-0.18	-61.40	-4.9	-1.7
369.0	1.00	206.45	368.9	-6.3	-3.2	0.56	-0.43	17.39	-7.1	0.0
494.0	1.20	162.45	493.9	-8.6	-3.2	0.68	0.16	-35.20	-7.2	-5.7
526.0	1.20	190.45	525.9	-9.2	-3.2	1.81	0.00	87.50	-9.6	-1.5
557.0	0.80	195.45	556.9	-9.7	-3.3	1.32	-1.29	16.13	-10.3	-0.6
589.0	1.30	167.45	588.9	-10.3	-3.3	2.20	1.56	-87.50	-9.3	-5.5
682.0	1.20	181.45	681.9	-12.3	-3.1	0.34	-0.11	15.05	-12.4	-2.8
713.0	0.80	147.45	712.9	-12.8	-3.0	2.25	-1.29	-109.68	-9.2	-9.4
744.0	1.30	166.45	743.9	-13.3	-2.8	1.94	1.61	61.29	-12.3	-5.8
776.0	1.30	163.45	775.8	-14.0	-2.6	0.21	0.00	-9.37	-12.7	-6.5
808.0	1.10	181.45	807.8	-14.7	-2.5	1.33	-0.62	56.25	-14.8	-2.1
901.0	1.20	153.45	900.8	-16.5	-2.1	0.61	0.11	-30.11	-13.8	-9.2
933.0	0.60	141.45	932.8	-16.9	-1.8	1.96	-1.87	-37.50	-12.1	-12.0
1,079.0	0.84	137.12	1,078.8	-18.3	-0.6	0.17	0.16	-2.97	-13.0	-12.9
1,172.0	0.80	147.50	1,171.8	-19.3	0.2	0.17	-0.04	11.16	-16.4	-10.2
1,265.0	0.90	79.90	1,264.8	-19.7	1.2	1.02	0.11	-72.69	2.2	-19.7
1,452.0	1.10	59.10	1,451.8	-18.6	4.2	0.22	0.11	-11.12	5.9	-18.1
1,546.0	1.10	58.20	1,545.7	-17.6	5.8	0.02	0.00	-0.96	4.4	-18.0
1,639.0	1.00	6.70	1,638.7	-16.4	6.6	0.99	-0.11	-55.38	15.5	-8.5
1,826.0	1.30	351.90	1,825.7	-12.6	6.5	0.22	0.16	-7.91	13.4	-4.7
2,013.0	1.10	357.00	2,012.6	-8.7	6.1	0.12	-0.11	2.73	9.0	-5.7
2,200.0	0.90	11.60	2,199.6	-5.5	6.3	0.17	-0.11	7.81	4.1	-7.3
2,388.0	0.60	3.30	2,387.6	-3.1	6.7	0.17	-0.16	-4.41	2.7	-6.8
2,575.0	0.70	28.90	2,574.6	-1.1	7.3	0.16	0.05	13.69	-2.6	-6.9

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3378.0usft (HP 647)
Site:	Andele 16 State Com	MD Reference:	KB = 25' @ 3378.0usft (HP 647)
Well:	#703H	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)
2,763.0	0.00	57.50	2,762.6	-0.1	7.8	0.37	-0.37	0.00	0.1	-7.8
2,951.0	1.40	73.70	2,950.6	0.5	10.0	0.74	0.74	0.00	-9.8	-2.3
3,139.0	4.20	117.80	3,138.3	-2.0	18.3	1.78	1.49	23.46	-14.1	8.1
3,326.0	5.50	121.80	3,324.7	-9.9	32.0	0.72	0.70	2.14	-17.6	13.6
3,513.0	6.40	142.00	3,510.7	-22.9	46.1	1.21	0.48	10.80	-17.6	21.7
3,701.0	5.30	142.30	3,697.7	-38.0	57.8	0.59	-0.59	0.16	-23.6	21.6
3,888.0	3.60	153.00	3,884.1	-50.1	65.8	1.01	-0.91	5.72	-20.8	24.4
4,076.0	3.10	132.50	4,071.8	-58.8	72.2	0.69	-0.27	-10.90	-25.7	15.5
4,264.0	3.50	135.10	4,259.5	-66.3	80.0	0.23	0.21	1.38	-22.7	18.2
4,451.0	4.40	163.70	4,446.1	-77.2	86.0	1.14	0.48	15.29	-11.4	24.6
4,639.0	5.00	136.50	4,633.5	-90.1	93.7	1.21	0.32	-14.47	-22.9	14.4
4,827.0	5.90	140.20	4,820.6	-103.4	105.5	0.51	0.48	1.97	-26.6	16.6
5,014.0	7.00	121.40	5,006.4	-116.7	121.4	1.27	0.59	-10.05	-38.8	8.4
5,201.0	5.50	165.70	5,192.4	-131.4	133.3	2.62	-0.80	23.69	-27.3	35.5
5,389.0	4.50	175.90	5,379.7	-147.5	136.1	0.71	-0.53	5.43	-26.1	33.9
5,576.0	4.80	162.30	5,566.1	-162.2	139.0	0.61	0.16	-7.27	-36.1	20.4
5,761.0	4.80	157.70	5,750.5	-176.8	144.3	0.21	0.00	-2.49	-40.7	13.1
5,949.0	4.40	149.50	5,937.9	-190.3	150.9	0.41	-0.21	-4.36	-44.2	4.1
6,136.0	4.20	116.00	6,124.4	-199.4	160.7	1.33	-0.11	-17.91	-40.2	-19.3
6,324.0	3.90	116.50	6,311.9	-205.3	172.6	0.16	-0.16	0.27	-41.7	-13.5
6,512.0	3.40	114.40	6,499.5	-210.5	183.4	0.28	-0.27	-1.12	-41.4	-9.4
6,700.0	2.90	113.60	6,687.2	-214.7	192.9	0.27	-0.27	-0.43	-39.9	-4.0
6,888.0	2.70	111.10	6,875.0	-218.2	201.4	0.12	-0.11	-1.33	-37.5	0.6
7,077.0	1.70	150.00	7,063.9	-222.2	206.9	0.92	-0.53	20.58	-22.1	24.7
7,264.0	1.80	156.60	7,250.8	-227.3	209.5	0.12	0.05	3.53	-12.2	23.9
7,452.0	2.10	145.30	7,438.7	-232.8	212.6	0.26	0.16	-6.01	-9.9	19.5
7,639.0	1.60	184.80	7,625.6	-238.3	214.3	0.71	-0.27	21.12	8.9	14.5

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Andele 16 State Com
Well: #703H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #703H
TVD Reference: KB = 25' @ 3378.0usft (HP 647)
MD Reference: KB = 25' @ 3378.0usft (HP 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)
7,827.0	0.90	159.50	7,813.5	-242.3	214.6	0.47	-0.37	-13.46	5.5	13.3
8,014.0	0.90	140.00	8,000.5	-244.8	216.1	0.16	0.00	-10.43	-2.0	13.9
8,201.0	1.30	103.60	8,187.5	-246.4	219.1	0.42	0.21	-19.47	-13.2	9.1
8,388.0	1.20	94.80	8,374.4	-247.0	223.1	0.12	-0.05	-4.71	-18.4	6.7
8,576.0	0.90	82.90	8,562.4	-247.0	226.5	0.20	-0.16	-6.33	-22.8	2.3
8,763.0	1.70	207.90	8,749.4	-249.3	226.7	1.25	0.43	66.84	13.0	18.6
8,950.0	0.70	217.60	8,936.3	-252.7	224.7	0.54	-0.53	5.19	12.1	16.6
9,137.0	0.90	219.70	9,123.3	-254.7	223.1	0.11	0.11	1.12	10.1	16.2
9,325.0	1.20	220.00	9,311.3	-257.3	220.9	0.16	0.16	0.16	6.7	16.1
9,513.0	1.10	192.10	9,499.2	-260.6	219.2	0.30	-0.05	-14.84	-5.1	16.5
9,688.0	1.00	175.30	9,674.2	-263.8	219.0	0.18	-0.06	-9.60	-12.8	13.8
9,876.0	1.30	189.10	9,862.2	-267.5	218.8	0.22	0.16	7.34	-12.9	16.9
10,064.0	1.90	165.90	10,050.1	-272.6	219.2	0.46	0.32	-12.34	-23.5	9.6
10,251.0	1.90	158.40	10,237.0	-278.5	221.1	0.13	0.00	-4.01	-30.8	6.0
10,438.0	0.40	26.70	10,424.0	-280.8	222.5	1.17	-0.80	-70.43	17.4	-29.3
10,621.0	0.50	346.80	10,607.0	-279.5	222.6	0.18	0.05	-21.80	30.8	-11.7
10,809.0	0.40	90.10	10,795.0	-278.7	223.1	0.38	-0.05	54.95	-19.0	-26.5
10,996.0	2.40	301.80	10,981.9	-276.6	220.4	1.47	1.07	-79.30	26.7	12.2
11,184.0	2.00	285.80	11,169.8	-273.7	213.9	0.39	-0.21	-8.51	15.2	18.0
11,371.0	1.70	290.80	11,356.7	-271.8	208.2	0.18	-0.16	2.67	10.7	16.9
11,557.0	0.40	307.90	11,542.6	-270.4	205.1	0.71	-0.70	9.19	12.0	13.8
11,744.0	0.40	303.70	11,729.6	-269.6	204.1	0.02	0.00	-2.25	9.6	14.6
11,847.0	0.10	71.60	11,832.6	-269.4	203.8	0.45	-0.29	124.17	5.8	-16.3
11,949.0	0.40	143.90	11,934.6	-269.7	204.1	0.37	0.29	70.88	-14.1	-10.4
12,042.0	0.70	144.60	12,027.6	-270.4	204.7	0.32	0.32	0.75	-15.2	-10.2
12,108.8	0.63	146.97	12,094.4	-271.0	205.1	0.11	-0.11	3.55	-16.3	-9.5

KOP (Andele 16 State Com #703H)

PVA Report

Company:	EOG Resources - Midland						Local Co-ordinate Reference:		Well #703H		
Project:	Lea County, NM (NAD 83 NME)						TVD Reference:		KB = 25' @ 3378.0usft (HP 647)		
Site:	Andele 16 State Com						MD Reference:		KB = 25' @ 3378.0usft (HP 647)		
Well:	#703H						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)	
12,136.0	0.60	148.10	12,121.6	-271.3	205.2	0.11	-0.11	4.14	-17.4	-9.6	
12,229.0	5.60	352.60	12,214.5	-267.2	204.9	6.61	5.38	-167.20	29.3	2.9	
12,276.0	15.80	353.30	12,260.6	-258.5	203.9	21.70	21.70	1.49	33.9	3.9	
12,323.0	21.30	354.90	12,305.2	-243.7	202.4	11.75	11.70	3.40	36.4	4.5	
12,370.0	24.00	355.30	12,348.5	-225.6	200.8	5.75	5.74	0.85	39.8	5.7	
12,417.0	31.80	358.60	12,390.0	-203.7	199.7	16.91	16.60	7.02	43.4	4.7	
12,464.0	42.20	359.90	12,427.5	-175.5	199.4	22.19	22.13	2.77	43.5	4.0	
12,510.0	46.10	1.10	12,460.5	-143.4	199.7	8.67	8.48	2.61	42.1	2.8	
12,557.0	50.10	0.80	12,491.9	-108.5	200.3	8.52	8.51	-0.64	41.5	2.2	
12,604.0	57.20	1.90	12,519.7	-70.6	201.2	15.22	15.11	2.34	40.6	0.6	
12,651.0	63.40	0.90	12,543.0	-29.8	202.2	13.32	13.19	-2.13	38.5	-0.2	
12,697.0	73.40	356.80	12,559.9	12.9	201.3	23.26	21.74	-8.91	34.1	1.5	
12,716.2	77.20	355.92	12,564.8	31.4	200.1	20.26	19.78	-4.56	31.1	2.7	
HL Crossing, MD:12716.2', TVD:12564.8',N/S:31.4', E/W:200.1', INC:77.20											
12,717.9	77.53	355.85	12,565.2	33.0	200.0	20.26	19.79	-4.48	30.8	2.8	
FTP (Andele 16 State Com #703H)											
12,744.0	82.70	354.70	12,569.7	58.7	197.8	20.26	19.79	-4.40	25.8	4.7	
12,791.0	92.90	357.60	12,571.5	105.4	194.7	22.56	21.70	6.17	14.1	7.0	
12,913.0	91.40	358.40	12,566.9	227.3	190.4	1.39	-1.23	0.66	-5.2	10.0	
13,006.0	90.80	0.40	12,565.1	320.3	189.5	2.24	-0.65	2.15	-6.2	10.2	
13,100.0	89.40	0.50	12,564.9	414.3	190.2	1.49	-1.49	0.11	-5.5	8.7	
13,194.0	88.40	0.50	12,566.7	508.2	191.0	1.06	-1.06	0.00	-2.9	7.2	
13,287.0	89.80	0.70	12,568.2	601.2	192.0	1.52	1.51	0.22	-0.6	5.5	
13,381.0	90.10	1.00	12,568.3	695.2	193.4	0.45	0.32	0.32	0.3	3.4	
13,475.0	89.50	2.00	12,568.6	789.2	195.9	1.24	-0.64	1.06	1.5	0.2	
13,569.0	90.30	0.40	12,568.8	883.1	197.8	1.90	0.85	-1.70	2.4	-2.5	
13,662.0	90.00	0.30	12,568.5	976.1	198.4	0.34	-0.32	-0.11	3.0	-3.8	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3378.0usft (HP 647)
Site:	Anale 16 State Com	MD Reference:	KB = 25' @ 3378.0usft (HP 647)
Well:	#703H	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)	
13,756.0	91.00	359.80	12,567.7	1,070.1	198.5	1.19	1.06	-0.53	3.0	-4.7	
13,850.0	91.60	0.10	12,565.6	1,164.1	198.4	0.71	0.64	0.32	1.7	-5.3	
13,944.0	89.10	0.10	12,565.0	1,258.1	198.6	2.66	-2.66	0.00	1.9	-6.2	
14,038.0	89.10	0.50	12,566.5	1,352.1	199.1	0.43	0.00	0.43	4.2	-7.4	
14,132.0	88.90	0.50	12,568.1	1,446.1	199.9	0.21	-0.21	0.00	6.7	-9.0	
14,180.0	89.36	0.96	12,568.9	1,494.0	200.5	1.37	0.97	0.97	7.8	-10.0	
TGT 1 (Anale 16 State Com #703H)											
14,225.0	89.80	1.40	12,569.2	1,539.0	201.4	1.37	0.97	0.97	8.6	-11.3	
14,318.0	90.20	0.60	12,569.2	1,632.0	203.0	0.96	0.43	-0.86	9.6	-13.6	
14,412.0	91.00	0.50	12,568.2	1,726.0	203.9	0.86	0.85	-0.11	9.5	-15.3	
14,506.0	90.60	0.80	12,566.9	1,820.0	205.0	0.53	-0.43	0.32	9.1	-17.1	
14,599.0	89.70	1.50	12,566.6	1,913.0	206.9	1.23	-0.97	0.75	9.8	-19.7	
14,693.0	91.20	359.40	12,565.9	2,007.0	207.6	2.75	1.60	-2.23	10.0	-21.1	
14,786.0	91.10	358.10	12,564.0	2,099.9	205.6	1.40	-0.11	-1.40	9.1	-19.8	
14,880.0	90.80	358.60	12,562.5	2,193.9	202.9	0.62	-0.32	0.53	8.5	-17.9	
14,974.0	92.00	358.20	12,560.2	2,287.8	200.3	1.35	1.28	-0.43	7.1	-16.0	
15,068.0	91.80	358.70	12,557.1	2,381.7	197.7	0.57	-0.21	0.53	4.9	-14.2	
15,162.0	91.30	359.30	12,554.5	2,475.7	196.1	0.83	-0.53	0.64	3.3	-13.3	
15,256.0	90.70	359.50	12,552.9	2,569.7	195.1	0.67	-0.64	0.21	2.6	-13.0	
15,350.0	90.10	0.10	12,552.2	2,663.7	194.8	0.90	-0.64	0.64	2.9	-13.4	
15,444.0	89.40	0.30	12,552.6	2,757.6	195.1	0.77	-0.74	0.21	4.3	-14.5	
15,538.0	90.90	0.10	12,552.4	2,851.6	195.4	1.61	1.60	-0.21	4.9	-15.6	
15,632.0	89.90	359.80	12,551.7	2,945.6	195.3	1.11	-1.06	-0.32	5.2	-16.2	
15,717.0	90.20	358.60	12,551.7	3,030.6	194.1	1.46	0.35	-1.41	6.0	-15.7	
15,782.6	90.91	358.11	12,551.0	3,096.2	192.3	1.31	1.08	-0.75	6.0	-14.4	
TGT 2 (Anale 16 State Com #703H)											
15,810.0	91.20	357.90	12,550.5	3,123.6	191.3	1.31	1.08	-0.75	5.9	-13.6	

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Andele 16 State Com
 Well: #703H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #703H
 TVD Reference: KB = 25' @ 3378.0usft (HP 647)
 MD Reference: KB = 25' @ 3378.0usft (HP 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)	
15,904.0	90.50	357.60	12,549.1	3,217.5	187.6	0.81	-0.74	-0.32	5.8	-10.7	
15,997.0	92.00	356.70	12,547.1	3,310.4	183.0	1.88	1.61	-0.97	5.1	-6.8	
16,092.0	91.00	357.00	12,544.6	3,405.2	177.8	1.10	-1.05	0.32	3.9	-2.3	
16,185.0	90.30	356.60	12,543.6	3,498.0	172.6	0.87	-0.75	-0.43	4.2	2.2	
16,279.0	92.50	358.40	12,541.3	3,591.9	168.5	3.02	2.34	1.91	3.2	5.5	
16,372.0	92.10	0.70	12,537.5	3,684.8	167.8	2.51	-0.43	2.47	0.7	5.5	
16,467.0	90.90	359.60	12,535.0	3,779.8	168.0	1.71	-1.26	-1.16	-0.4	4.5	
16,560.0	90.40	358.90	12,534.0	3,872.8	166.8	0.92	-0.54	-0.75	-0.2	5.0	
16,653.0	89.90	358.80	12,533.7	3,965.7	164.9	0.55	-0.54	-0.11	0.9	6.2	
16,747.0	90.10	358.60	12,533.7	4,059.7	162.8	0.30	0.21	-0.21	2.2	7.6	
16,841.0	91.90	359.70	12,532.1	4,153.7	161.4	2.24	1.91	1.17	1.9	8.2	
16,935.0	89.30	358.40	12,531.1	4,247.7	159.8	3.09	-2.77	-1.38	2.2	9.0	
17,028.0	90.00	358.60	12,531.7	4,340.6	157.4	0.78	0.75	0.22	4.1	10.7	
17,123.0	89.80	357.60	12,531.8	4,435.6	154.2	1.07	-0.21	-1.05	5.6	13.1	
17,216.0	91.20	358.10	12,531.0	4,528.5	150.8	1.60	1.51	0.54	6.1	15.9	
17,310.0	90.70	356.10	12,529.5	4,622.4	146.0	2.19	-0.53	-2.13	5.9	19.9	
17,327.7	90.76	357.18	12,529.3	4,640.0	145.0	6.14	0.33	6.13	5.9	20.8	
HL Crossing, MD:17327.7', TVD:12529.3', N/S:4640.0', E/W:145.0', INC:90.76											
17,403.0	91.00	1.80	12,528.1	4,715.3	144.3	6.14	0.32	6.13	5.7	20.9	
17,422.0	91.00	1.90	12,527.8	4,734.3	144.9	0.53	0.00	0.53	5.7	20.1	
Final MWD Survey (MD= 17422.0') - PBHL (Andele 16 State Com #703H)											
17,490.0	91.00	1.90	12,526.6	4,802.2	147.2	0.00	0.00	0.00	17.8	62.4	
Final Bit Projection (MD= 17490.0')											

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3378.0usft (HP 647)
Site:	Andele 16 State Com	MD Reference:	KB = 25' @ 3378.0usft (HP 647)
Well:	#703H	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)	
12,716.2	12,564.8	31.4	200.1	HL Crossing, MD:12716.2', TVD:12564.8', N/S:31.4', E/W:200.1', INC:77.20
17,327.7	12,529.3	4,640.0	145.0	HL Crossing, MD:17327.7', TVD:12529.3', N/S:4640.0', E/W:145.0', INC:90.76
17,422.0	12,527.8	4,734.3	144.9	Final MWD Survey (MD= 17422.0')
17,490.0	12,526.6	4,802.2	147.2	Final Bit Projection (MD= 17490.0')

Checked By: _____	Approved By: _____	Date: _____
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