



HOBBS OCD

APR 19 2017

RECEIVED

Lea County, NM (NAD 27 NME)

Beowulf 33 State Com #601H

Noram #30

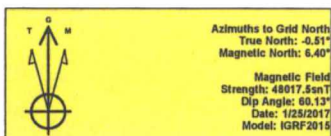
Plan #3

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: #601H

Ground Level: 3404.0
KB = 25 @ 3429.0ust (Noram #30)
Northing: 457637.00 Easting: 796072.00 Latitude: 32° 15' 16.310 N Longitude: 103° 22' 32.197 W



To convert a Magnetic Direction to a Grid Direction, Add 6.40°
To convert a Magnetic Direction to a True Direction, Add 6.41° East
To convert a True Direction to a Grid Direction, Subtract 0.01°

SECTION DETAILS

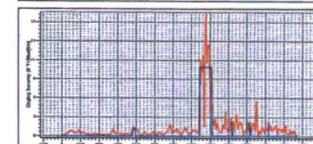
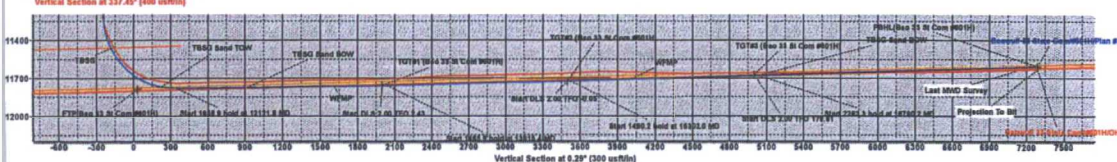
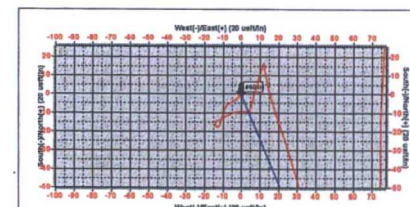
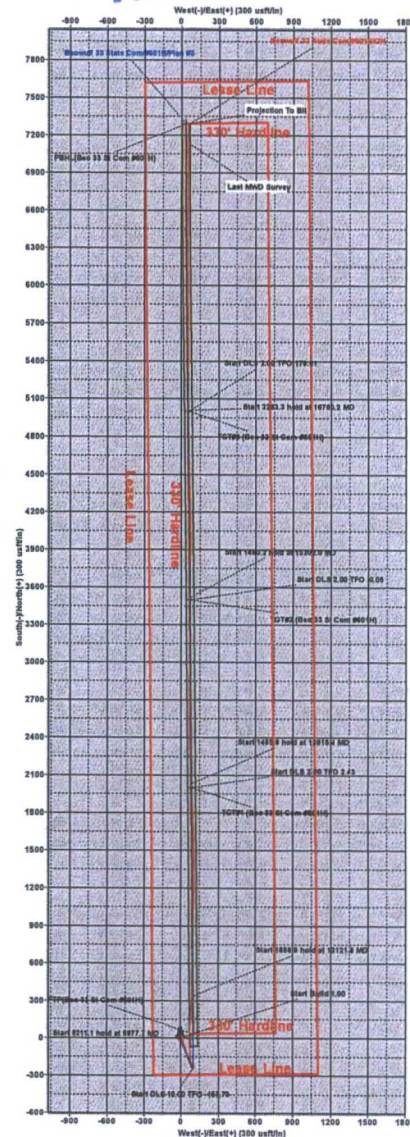
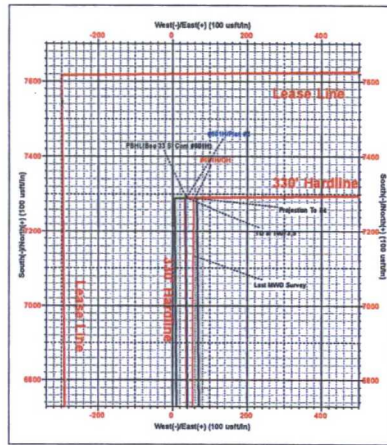
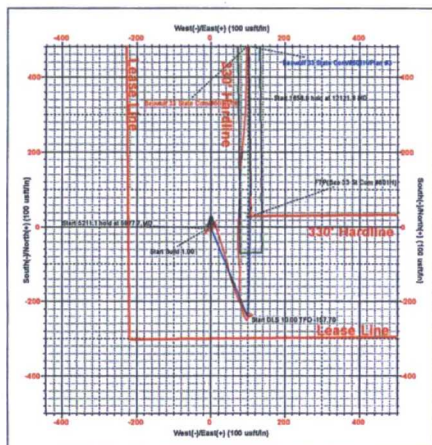
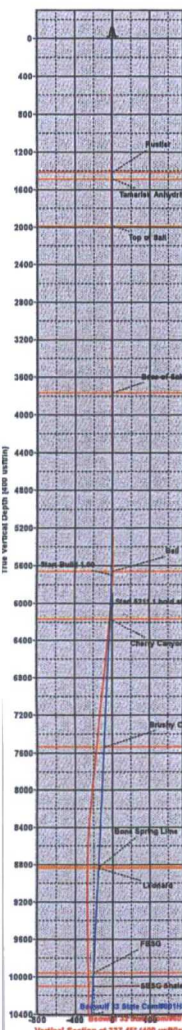
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5700.0	0.00	0.00	5700.0	0.0	0.0	0.00	0.00	0.0	
3	5977.7	2.78	157.15	5977.5	-6.2	2.6	1.00	157.15	-6.2	
4	11188.8	2.78	157.15	11182.6	-238.8	100.6	0.00	0.00	-238.3	
5	12121.8	90.73	359.41	11781.1	340.9	105.8	10.00	-157.70	341.5	
6	13780.7	90.73	359.41	11760.0	1999.6	88.7	0.00	0.00	2000.0	TGT#1 (Beo 33 St Com #601H)
7	13815.4	91.42	359.44	11759.3	2034.3	88.4	2.00	2.43	2034.7	
8	15281.3	91.42	359.44	11723.0	3499.7	74.1	0.00	0.00	3500.0	TGT#2 (Beo 33 St Com #601H)
9	15302.0	91.84	359.44	11722.4	3520.4	73.9	2.00	-0.05	3520.8	
10	16782.2	91.84	359.44	11675.0	4999.8	59.4	0.00	0.00	5000.0	TGT#3 (Beo 33 St Com #601H)
11	16790.2	91.68	359.44	11674.8	5007.8	59.3	2.00	179.81	5008.0	
12	19073.5	91.68	359.44	11608.0	7290.0	37.0	0.00	0.00	7290.1	PBHL(Beo 33 St Com #601H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL(Beo 33 St Com #601H)	11608.0	7290.0	37.0	454927.00	796108.00
TGT#3 (Beo 33 St Com #601H)	11675.0	4999.8	59.4	462636.80	796131.39
TGT#2 (Beo 33 St Com #601H)	11723.0	3499.7	74.1	461136.70	796146.06
TGT#1 (Beo 33 St Com #601H)	11760.0	1999.6	88.7	460636.50	796160.74
FTP(Beo 33 St Com #601H)	11765.0	31.0	109.0	457668.00	796161.00





EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Beowulf 33 State Com

#601H

OH

Design: OH

PVA

15 February, 2017



EOG Resources, Inc.

PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #601H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3429.0usft (Noram #30)
Site:	Beowulf 33 State Com	MD Reference:	KB = 25 @ 3429.0usft (Noram #30)
Well:	#601H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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	Beowulf 33 State Com		
Site Position:		Northing:	457,637.00 usft
From:	Map	Easting:	796,072.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 16.310 N
		Longitude:	103° 22' 32.197 W
		Grid Convergence:	0.51 °

Well	#601H		
Well Position	+N-S	0.0 usft	Northing: 457,637.00 usft
	+E-W	0.0 usft	Easting: 796,072.00 usft
Position Uncertainty		0.0 usft	Wellhead Elevation: 0.0 usft
			Latitude: 32° 15' 16.310 N
			Longitude: 103° 22' 32.197 W
			Ground Level: 3,404.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	1/25/2017	6.91
			Dip Angle (°) 60.13
			Field Strength (nT) 48,017

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
			Direction (°) 0.29

Survey Program	Date 2/15/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
143.0	19,046.0	Learn MWD (OH)	MWD
			Description MWD - Standard



EOG Resources, Inc.

PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Beowulf 33 State Com
 Well: #601H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #601H
 TVD Reference: KB = 25 @ 3429.0usft (Noram #30)
 MD Reference: KB = 25 @ 3429.0usft (Noram #30)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

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	0.0
143.0	0.10	21.30	143.0	0.1	0.0	0.07	0.07	0.00	-0.1	0.0	
324.0	0.30	202.70	324.0	-0.2	-0.1	0.22	0.11	-98.67	-0.2	0.0	
506.0	1.00	218.90	506.0	-1.8	-1.3	0.39	0.38	8.90	-2.2	0.2	
691.0	2.10	242.60	690.9	-4.7	-5.3	0.68	0.59	12.81	-6.8	1.7	
877.0	1.20	201.30	876.8	-8.0	-9.0	0.77	-0.48	-22.20	-10.8	-5.5	
1,062.0	0.50	175.30	1,061.8	-10.7	-9.7	0.42	-0.38	-14.05	-9.8	-10.5	
1,248.0	0.30	354.80	1,247.8	-11.0	-9.6	0.43	-0.11	96.51	10.1	10.6	
1,433.0	1.10	202.90	1,432.8	-12.1	-10.4	0.74	0.43	-82.11	-15.2	-4.8	
1,454.0	1.10	192.60	1,453.8	-12.5	-10.5	0.94	0.00	-49.05	-14.5	-7.5	
1,568.0	1.40	195.70	1,567.8	-14.9	-11.1	0.27	0.26	2.72	-17.4	-6.7	
1,756.0	0.40	219.30	1,755.8	-17.6	-12.1	0.56	-0.53	12.55	-21.3	1.8	
1,943.0	0.40	275.20	1,942.8	-18.1	-13.2	0.20	0.00	29.89	-11.5	19.2	
2,131.0	0.40	337.70	2,130.7	-17.4	-14.1	0.22	0.00	33.24	10.8	19.7	
2,318.0	0.40	6.90	2,317.7	-16.2	-14.3	0.11	0.00	15.61	17.8	12.2	
2,506.0	0.10	73.20	2,505.7	-15.5	-14.0	0.20	-0.16	35.27	17.9	-10.8	
2,693.0	0.70	45.60	2,692.7	-14.6	-13.1	0.33	0.32	-14.76	19.6	-1.3	
2,881.0	0.70	77.90	2,880.7	-13.6	-11.1	0.21	0.00	17.18	13.7	-10.9	
3,037.0	1.00	58.10	3,036.7	-12.7	-9.0	0.27	0.19	-12.69	14.4	-6.0	
3,225.0	1.00	61.40	3,224.7	-11.0	-6.2	0.03	0.00	1.76	10.7	-6.7	
3,412.0	0.80	78.60	3,411.7	-10.0	-3.5	0.18	-0.11	9.20	5.4	-9.1	
3,600.0	1.10	91.00	3,599.6	-9.7	-0.4	0.19	0.16	6.60	0.2	-9.8	
3,788.0	0.80	88.30	3,787.6	-9.7	2.7	0.16	-0.16	-1.44	-2.4	-9.8	
3,976.0	0.40	85.20	3,975.6	-9.6	4.7	0.21	-0.21	-1.65	-3.9	-10.0	
4,163.0	1.80	3.10	4,162.6	-6.7	5.5	0.96	0.75	-43.90	6.3	-5.8	
4,351.0	1.80	25.40	4,350.5	-1.0	6.9	0.37	0.00	11.86	-2.0	-6.7	
4,539.0	1.70	8.20	4,538.4	4.4	8.6	0.28	-0.05	-9.15	-5.6	-7.9	



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PVA

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Project: Lea County, NM (NAD 27 NME)
Site: Beowulf 33 State Com
Well: #601H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #601H
TVD Reference: KB = 25 @ 3429.0usft (Noram #30)
MD Reference: KB = 25 @ 3429.0usft (Noram #30)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
4,727.0	1.10	14.70	4,726.3	8.9	9.4	0.33	-0.32	3.46	-11.0	-6.9
4,915.0	0.90	29.40	4,914.3	11.9	10.6	0.17	-0.11	7.82	-15.6	-3.4
5,103.0	0.60	3.40	5,102.3	14.2	11.4	0.24	-0.16	-13.83	-14.8	-10.5
5,291.0	0.20	54.40	5,290.3	15.4	11.7	0.27	-0.21	27.13	-18.5	5.7
5,483.0	0.10	29.30	5,482.3	15.7	12.1	0.06	-0.05	-13.07	-19.6	-2.8
5,568.0	0.30	3.90	5,567.3	16.0	12.1	0.25	0.24	-29.88	-16.8	-11.0
5,755.0	2.10	173.00	5,754.2	13.1	12.6	1.28	0.96	90.43	11.7	14.0
5,943.0	4.00	167.20	5,942.0	3.3	14.5	1.02	1.01	-3.09	5.0	13.9
6,131.0	5.50	160.40	6,129.3	-11.6	18.9	0.85	0.80	-3.62	-3.2	13.1
6,318.0	5.50	162.00	6,315.5	-28.6	24.7	0.08	0.00	0.86	-11.8	12.7
6,506.0	5.30	164.10	6,502.6	-45.5	29.9	0.15	-0.11	1.12	-20.0	12.4
6,692.0	6.40	161.40	6,687.6	-63.6	35.5	0.61	0.59	-1.45	-30.5	10.4
6,880.0	6.20	163.90	6,874.5	-83.3	41.7	0.18	-0.11	1.33	-41.6	11.1
7,068.0	5.90	167.10	7,061.5	-102.4	46.7	0.24	-0.16	1.70	-51.8	12.4
7,256.0	5.50	168.30	7,248.5	-120.7	50.6	0.22	-0.21	0.64	-61.3	11.9
7,443.0	6.40	161.40	7,434.5	-139.3	55.8	0.61	0.48	-3.69	-72.6	2.7
7,631.0	6.10	161.10	7,621.4	-158.7	62.4	0.16	-0.16	-0.16	-84.0	1.6
7,819.0	5.40	161.80	7,808.5	-176.6	68.4	0.37	-0.37	0.37	-93.8	2.0
8,007.0	5.50	152.50	7,995.6	-193.0	75.3	0.47	0.05	-4.95	-101.6	-13.8
8,194.0	5.70	151.20	8,181.7	-209.1	83.9	0.13	0.11	-0.70	-110.5	-15.4
8,382.0	4.90	152.30	8,368.9	-224.3	92.1	0.43	-0.43	0.59	-119.1	-12.3
8,569.0	3.70	154.10	8,555.4	-236.8	98.5	0.65	-0.64	0.96	-124.4	-7.8
8,757.0	1.00	104.80	8,743.2	-242.7	102.7	1.67	-1.44	-26.22	-75.2	-96.8
8,945.0	1.20	72.50	8,931.2	-242.6	106.2	0.34	0.11	-17.18	-14.4	-113.8
9,132.0	2.20	56.30	9,118.1	-240.0	111.0	0.59	0.53	-8.66	10.6	-105.0
9,320.0	0.30	55.10	9,306.1	-237.7	114.4	1.01	-1.01	-0.64	7.0	-95.9
9,507.0	1.00	314.00	9,493.0	-236.3	113.7	0.59	0.37	-54.06	82.8	21.3



EOG Resources, Inc.

PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Beowulf 33 State Com
Well: #601H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #601H
TVD Reference: KB = 25 @ 3429.0usft (Noram #30)
MD Reference: KB = 25 @ 3429.0usft (Noram #30)
North Reference: Grid
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Database: EDM 5000.1 Single User Db

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)	
9,694.0	1.20	298.40	9,680.0	-234.2	110.8	0.19	0.11	-8.34	63.5	36.7	
9,882.0	2.30	274.60	9,867.9	-233.0	105.3	0.69	0.59	-12.66	33.4	50.4	
10,070.0	0.20	336.30	10,055.9	-232.4	101.4	1.18	-1.12	32.82	49.0	-2.5	
10,257.0	0.50	148.80	10,242.9	-232.8	101.7	0.37	0.16	92.25	-40.4	-2.6	
10,445.0	0.60	221.00	10,430.9	-234.2	101.5	0.35	0.05	38.40	-12.0	30.3	
10,633.0	1.60	147.60	10,618.8	-237.2	102.2	0.82	0.53	-39.04	-26.4	-2.3	
10,820.0	2.40	189.70	10,805.7	-243.2	103.0	0.87	0.43	22.51	-19.4	12.8	
11,008.0	1.70	199.90	10,993.6	-249.7	101.3	0.42	-0.37	5.43	-16.7	10.6	
11,101.0	2.20	213.60	11,086.6	-252.5	99.9	0.73	0.54	14.73	-14.4	10.8	
11,204.0	6.30	334.20	11,189.4	-249.1	96.3	7.43	3.98	117.09	7.0	8.4	
11,251.0	11.30	339.70	11,235.8	-242.4	93.6	10.78	10.64	11.70	0.7	8.8	
11,298.0	15.30	341.60	11,281.5	-232.2	90.0	8.56	8.51	4.04	-6.1	11.1	
11,345.0	20.00	341.10	11,326.3	-218.7	85.5	10.01	10.00	-1.06	-13.2	14.3	
11,391.0	22.90	349.70	11,369.1	-202.5	81.3	9.28	6.30	18.70	-16.8	20.1	
11,438.0	27.50	356.70	11,411.6	-182.6	79.1	11.65	9.79	14.89	-19.3	24.6	
11,485.0	31.30	1.70	11,452.6	-159.6	78.8	9.62	8.09	10.64	-21.8	27.0	
11,532.0	30.80	2.50	11,492.9	-135.4	79.7	1.38	-1.06	1.70	-23.4	26.9	
11,579.0	34.60	357.40	11,532.4	-110.0	79.6	9.98	8.09	-10.85	-24.5	25.7	
11,626.0	41.90	353.40	11,569.3	-81.0	77.2	16.39	15.53	-8.51	-25.6	27.3	
11,672.0	49.50	357.40	11,601.4	-48.2	74.6	17.65	16.52	8.70	-25.8	31.5	
11,719.0	52.80	3.20	11,630.9	-11.7	74.9	11.90	7.02	12.34	-26.0	33.2	
11,766.0	57.70	2.00	11,657.7	26.9	76.6	10.63	10.43	-2.55	-28.2	31.2	
11,813.0	63.80	1.30	11,680.6	67.9	77.8	13.04	12.98	-1.49	-30.5	29.9	
11,860.0	70.00	1.70	11,699.1	111.1	78.9	13.21	13.19	0.85	-33.6	28.8	
11,907.0	75.50	4.10	11,713.0	155.9	81.2	12.68	11.70	5.11	-37.1	26.8	
11,954.0	81.10	6.80	11,722.5	201.7	85.6	13.17	11.91	5.74	-41.4	22.5	
12,001.0	82.30	5.90	11,729.3	247.9	90.7	3.18	2.55	-1.91	-44.6	16.6	



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PVA

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Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #601H
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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)
12,048.0	83.10	3.40	11,735.3	294.3	94.5	5.54	1.70	-5.32	-44.3	12.0
12,095.0	86.00	1.70	11,739.8	341.1	96.6	7.14	6.17	-3.62	-41.3	9.2
12,142.0	90.10	0.20	11,741.3	388.0	97.4	9.29	8.72	-3.19	-39.1	8.0
12,223.0	92.00	0.20	11,739.9	469.0	97.6	2.35	2.35	0.00	-39.6	6.8
12,317.0	93.10	1.10	11,735.7	562.9	98.7	1.51	1.17	0.96	-42.6	4.8
12,411.0	90.80	0.80	11,732.5	656.8	100.3	2.47	-2.45	-0.32	-44.6	2.3
12,505.0	91.50	0.40	11,730.6	750.8	101.3	0.86	0.74	-0.43	-45.3	0.3
12,598.0	89.80	0.60	11,729.5	843.8	102.1	1.84	-1.83	0.22	-45.1	-1.4
12,692.0	90.60	0.80	11,729.2	937.8	103.2	0.88	0.85	0.21	-44.3	-3.6
12,785.0	91.20	1.00	11,727.8	1,030.8	104.7	0.68	0.65	0.22	-44.5	-6.0
12,879.0	91.60	0.80	11,725.5	1,124.7	106.1	0.48	0.43	-0.21	-45.6	-8.4
12,972.0	92.10	1.10	11,722.5	1,217.7	107.7	0.63	0.54	0.32	-47.5	-10.9
13,066.0	91.10	359.90	11,719.8	1,311.6	108.5	1.66	-1.06	-1.28	-48.9	-12.7
13,160.0	92.00	0.40	11,717.3	1,405.6	108.8	1.10	0.96	0.53	-50.2	-13.9
13,254.0	89.70	358.10	11,715.9	1,499.6	107.5	3.46	-2.45	-2.45	-50.5	-13.6
13,348.0	90.70	358.70	11,715.6	1,593.5	104.9	1.24	1.06	0.64	-49.6	-12.0
13,442.0	90.50	358.10	11,714.6	1,687.5	102.3	0.67	-0.21	-0.64	-49.4	-10.3
13,536.0	90.90	358.10	11,713.4	1,781.4	99.2	0.43	0.43	0.00	-49.3	-8.2
13,629.0	90.20	357.30	11,712.5	1,874.3	95.4	1.14	-0.75	-0.86	-49.1	-5.4
13,723.0	92.60	357.60	11,710.2	1,968.2	91.2	2.57	2.55	0.32	-50.2	-2.2
13,817.0	93.60	358.00	11,705.2	2,062.0	87.6	1.15	1.06	0.43	-53.5	0.5
13,911.0	91.60	357.40	11,700.9	2,155.8	83.9	2.22	-2.13	-0.64	-55.4	3.4
14,004.0	91.90	356.90	11,698.1	2,248.7	79.3	0.63	0.32	-0.54	-56.0	7.1
14,098.0	93.60	357.30	11,693.5	2,342.4	74.5	1.86	1.81	0.43	-58.1	10.9
14,192.0	93.20	0.10	11,688.0	2,436.2	72.4	3.00	-0.43	2.98	-61.4	12.1
14,286.0	92.40	0.60	11,683.4	2,530.1	72.9	1.00	-0.85	0.53	-63.7	10.6
14,380.0	91.00	0.40	11,680.6	2,624.1	73.8	1.50	-1.49	-0.21	-64.1	8.8



EOG Resources, Inc.

PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Beowulf 33 State Corn
Well: #601H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #601H
TVD Reference: KB = 25 @ 3429.0usft (Noram #30)
MD Reference: KB = 25 @ 3429.0usft (Noram #30)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
14,474.0	89.60	359.20	11,680.1	2,718.1	73.4	1.96	-1.49	-1.28	-62.3	8.3
14,568.0	91.00	0.10	11,679.6	2,812.1	72.9	1.77	1.49	0.96	-60.4	7.9
14,662.0	91.90	0.60	11,677.2	2,906.0	73.4	1.10	0.96	0.53	-60.5	6.4
14,756.0	91.80	0.60	11,674.2	3,000.0	74.4	0.11	-0.11	0.00	-61.2	4.5
14,850.0	91.30	0.10	11,671.6	3,093.9	75.0	0.75	-0.53	-0.53	-61.4	3.0
14,944.0	90.90	359.50	11,669.8	3,187.9	74.7	0.77	-0.43	-0.64	-60.9	2.4
15,038.0	90.50	358.70	11,668.7	3,281.9	73.2	0.95	-0.43	-0.85	-59.7	3.0
15,132.0	91.80	359.90	11,666.8	3,375.9	72.0	1.88	1.38	1.28	-59.2	3.2
15,226.0	92.50	359.90	11,663.3	3,469.8	71.9	0.74	0.74	0.00	-60.4	2.5
15,321.0	93.20	0.20	11,658.6	3,564.7	72.0	0.80	0.74	0.32	-62.4	1.4
15,414.0	92.90	0.80	11,653.6	3,657.6	72.8	0.72	-0.32	0.65	-64.4	-0.3
15,508.0	91.20	1.10	11,650.2	3,751.5	74.3	1.84	-1.81	0.32	-64.7	-2.8
15,602.0	89.60	1.70	11,649.6	3,845.4	76.6	1.82	-1.70	0.64	-62.4	-6.0
15,696.0	89.70	2.40	11,650.2	3,939.4	80.0	0.75	0.11	0.74	-58.8	-10.3
15,790.0	87.40	358.30	11,652.5	4,033.3	80.6	5.00	-2.45	-4.36	-53.4	-11.7
15,884.0	88.40	358.70	11,656.0	4,127.2	78.1	1.15	1.06	0.43	-47.0	-10.2
15,977.0	88.50	358.70	11,658.5	4,220.2	76.0	0.11	0.11	0.00	-41.5	-9.0
16,071.0	89.30	358.70	11,660.3	4,314.1	73.9	0.85	0.85	0.00	-36.6	-7.8
16,165.0	89.00	358.50	11,661.7	4,408.1	71.6	0.38	-0.32	-0.21	-32.2	-6.4
16,259.0	90.20	358.30	11,662.4	4,502.0	68.9	1.29	1.28	-0.21	-28.6	-4.7
16,353.0	90.90	358.70	11,661.5	4,596.0	66.5	0.86	0.74	0.43	-26.5	-3.1
16,447.0	91.10	358.30	11,659.8	4,690.0	64.0	0.48	0.21	-0.43	-25.1	-1.6
16,541.0	89.90	359.20	11,659.0	4,783.9	62.0	1.60	-1.28	0.96	-22.9	-0.5
16,635.0	90.60	359.40	11,658.6	4,877.9	60.8	0.77	0.74	0.21	-20.3	-0.2
16,732.0	90.10	0.20	11,658.0	4,974.9	60.5	0.97	-0.52	0.82	-17.8	-0.9
16,825.0	90.90	0.40	11,657.2	5,067.9	61.0	0.89	0.86	0.22	-15.8	-2.3
16,919.0	89.50	0.40	11,656.9	5,161.9	61.6	1.49	-1.49	0.00	-13.4	-3.8



EOG Resources, Inc.
PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Beowulf 33 State Com
Well: #601H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #601H
TVD Reference: KB = 25 @ 3429.0usft (Noram #30)
MD Reference: KB = 25 @ 3429.0usft (Noram #30)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
17,013.0	90.20	0.40	11,657.1	5,255.9	62.3	0.74	0.74	0.00	-10.4	-5.4
17,107.0	91.20	0.20	11,656.0	5,349.9	62.8	1.08	1.06	-0.21	-8.8	-6.8
17,201.0	90.40	0.20	11,654.6	5,443.9	63.1	0.85	-0.85	0.00	-7.4	-8.1
17,295.0	91.60	0.40	11,653.0	5,537.9	63.6	1.29	1.28	0.21	-6.2	-9.5
17,389.0	90.50	359.50	11,651.3	5,631.8	63.5	1.51	-1.17	-0.96	-5.2	-10.3
17,483.0	90.40	359.70	11,650.5	5,725.8	62.9	0.24	-0.11	0.21	-3.2	-10.6
17,577.0	89.40	359.40	11,650.7	5,819.8	62.1	1.11	-1.06	-0.32	-0.3	-10.7
17,671.0	90.30	359.00	11,651.0	5,913.8	60.8	1.05	0.96	-0.43	2.7	-10.4
17,765.0	89.50	359.50	11,651.1	6,007.8	59.6	1.00	-0.85	0.53	5.6	-10.0
17,858.0	89.00	359.20	11,652.3	6,100.8	58.5	0.63	-0.54	-0.32	9.5	-9.9
17,952.0	90.00	359.50	11,653.2	6,194.8	57.5	1.11	1.06	0.32	13.1	-9.8
18,046.0	89.50	359.70	11,653.6	6,288.8	56.8	0.57	-0.53	0.21	16.3	-10.0
18,140.0	90.90	359.90	11,653.2	6,382.8	56.5	1.50	1.49	0.21	18.7	-10.6
18,233.0	90.60	0.10	11,652.0	6,475.8	56.5	0.39	-0.32	0.22	20.2	-11.5
18,327.0	90.80	359.90	11,650.9	6,569.8	56.5	0.30	0.21	-0.21	21.8	-12.4
18,421.0	90.90	359.70	11,649.5	6,663.8	56.1	0.24	0.11	-0.21	23.1	-13.0
18,515.0	91.70	0.10	11,647.3	6,757.7	56.0	0.95	0.85	0.43	23.8	-13.8
18,608.0	91.90	0.10	11,644.4	6,850.7	56.1	0.22	0.22	0.00	23.6	-14.8
18,702.0	92.30	0.10	11,641.0	6,944.6	56.3	0.43	0.43	0.00	22.9	-15.9
18,796.0	91.60	0.40	11,637.8	7,038.6	56.7	0.81	-0.74	0.32	22.4	-17.2
18,890.0	91.30	0.60	11,635.4	7,132.5	57.5	0.38	-0.32	0.21	22.8	-19.0
Last MWD Survey 19,046.0	91.30	0.60	11,631.9	7,288.5	59.2	0.00	0.00	0.00	23.8	-22.1
Projection To Bit										



EOG Resources, Inc.

PVA

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Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
18,890.0	11,635.4	7,132.5	57.5	Last MWD Survey
19,046.0	11,631.9	7,288.5	59.2	Projection To Bit

Checked By: _____ Approved By: _____ Date: _____