

AUG 23 2017

RECEIVED



Lea County, NM (NAD 27 NME)

Black Bear 36 State

#705H

H&P 466

Plan #2

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

Azimuths to Grid North
 True North: -0.43°
 Magnetic North: 6.50°

Magnetic Field
 Strength: 47873.9nT
 Dip Angle: 59.95°
 Date: 5/22/2017
 Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.50°
 To convert a Magnetic Direction to a True Direction, Add 6.50° East
 To convert a True Direction to a Grid Direction, Subtract 0.43°

WELL DETAILS: #705H

Ground Level: 3329.0
 KB = 25 @ 3354.0usft (H&P 466)
 Northing 398668.00 Easting 751592.00 32° 5' 36.416 N 103° 31' 15.309 W

SECTION DETAILS

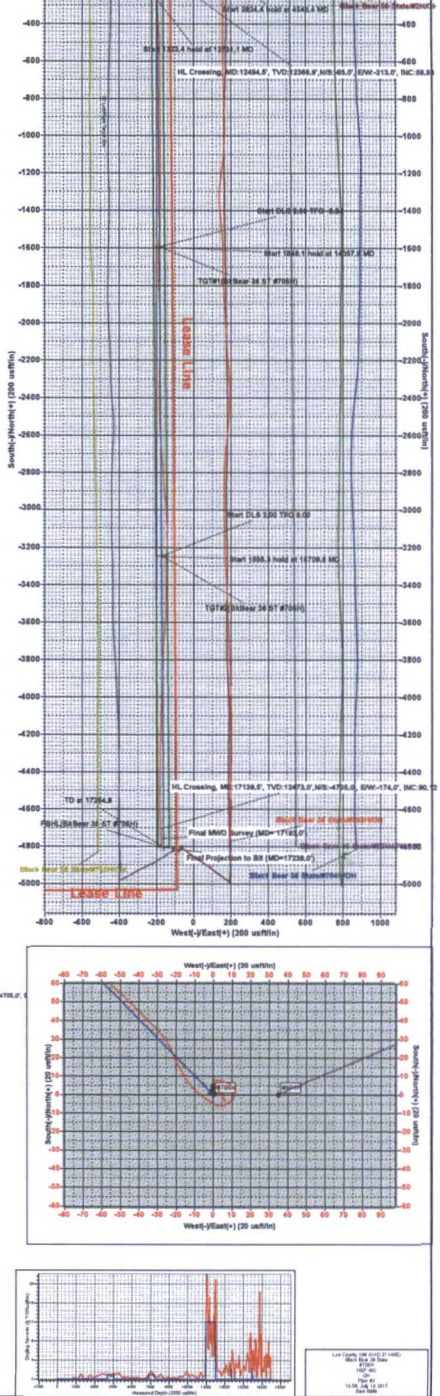
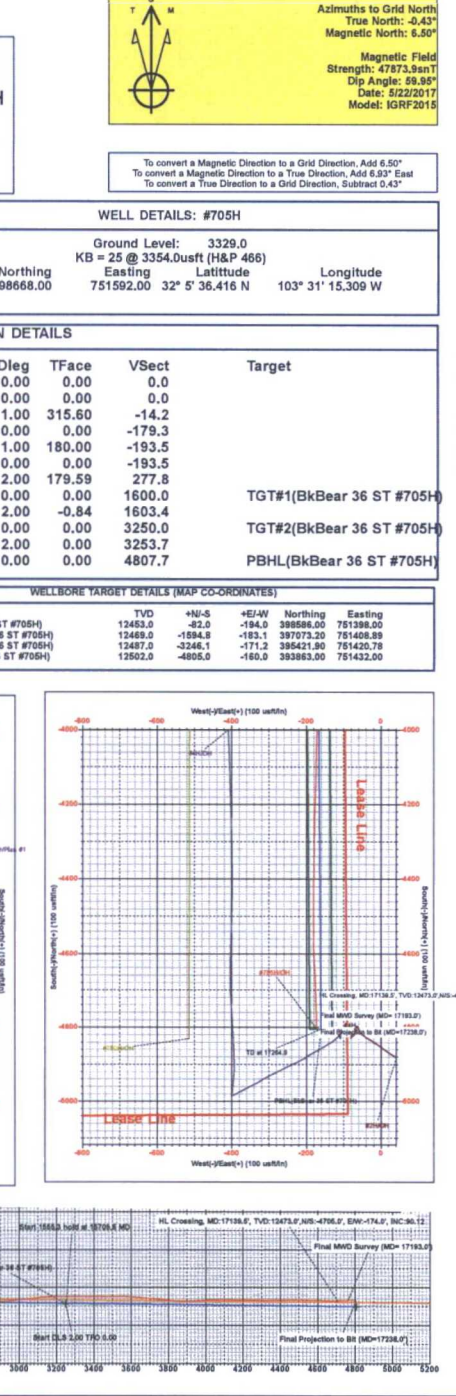
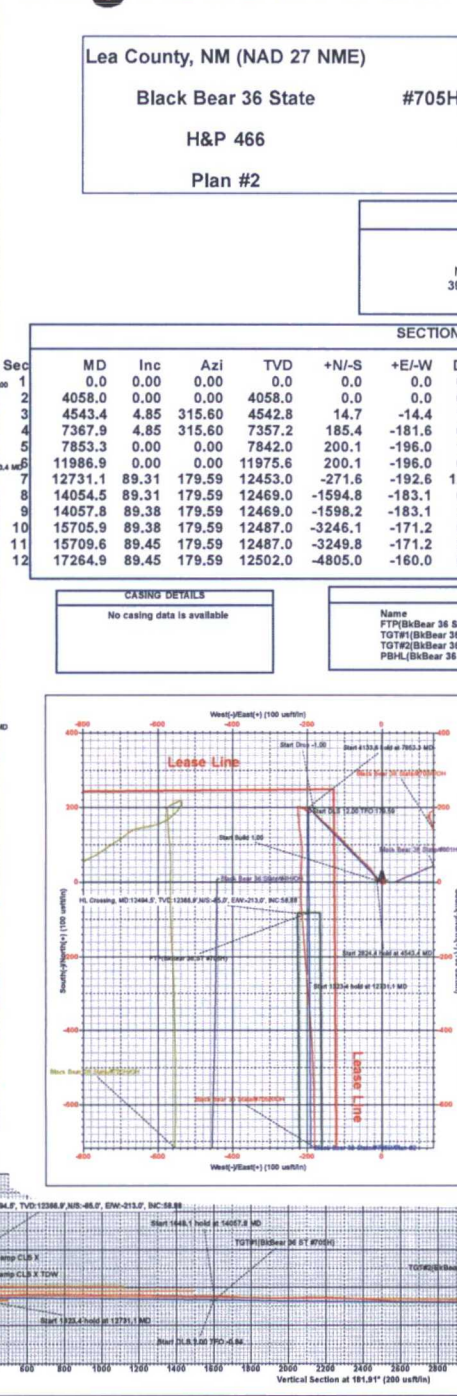
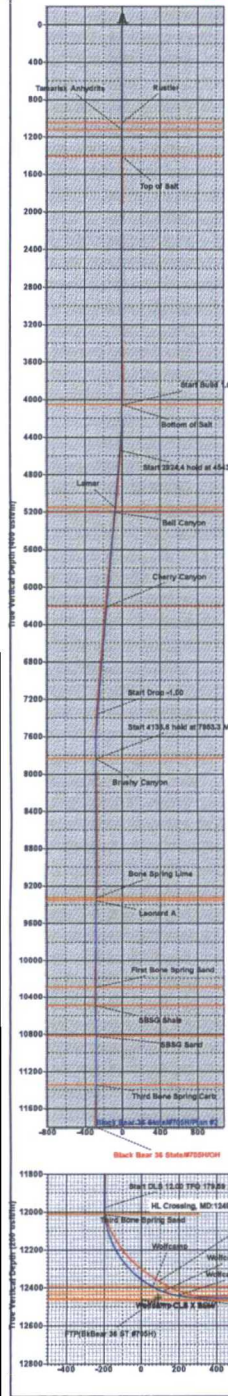
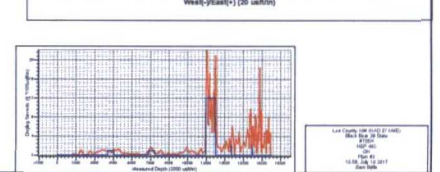
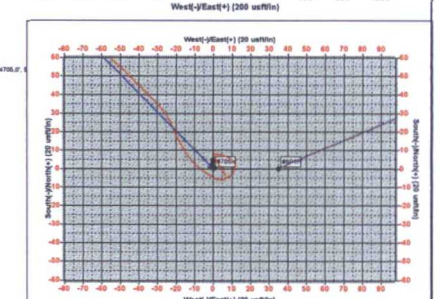
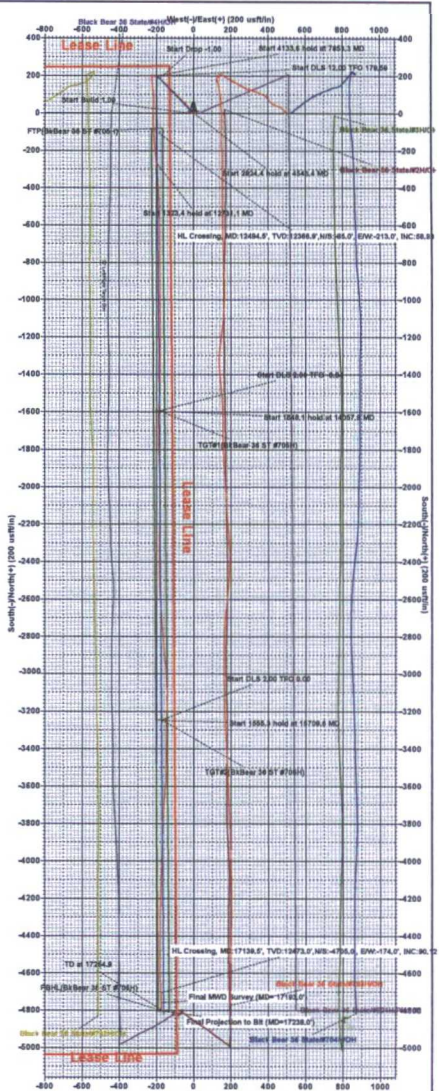
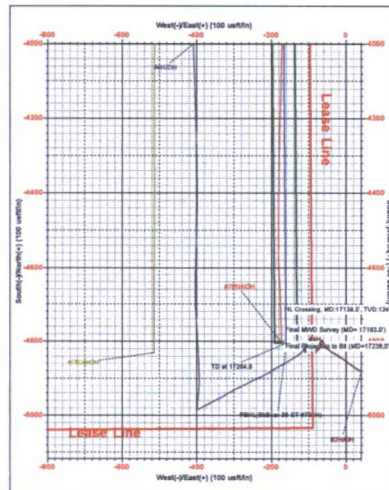
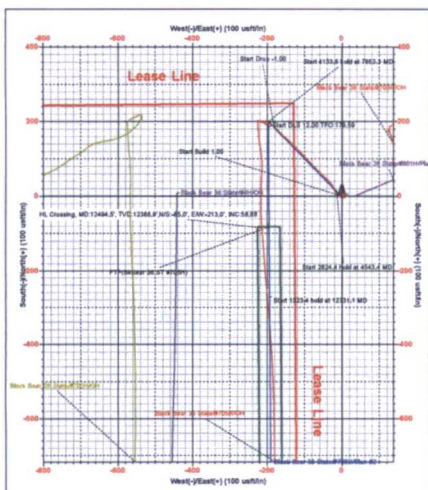
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4058.0	0.00	0.00	4058.0	0.0	0.0	0.00	0.00	0.0	
3	4543.4	4.85	315.60	4542.8	14.7	-14.4	1.00	315.60	-14.2	
4	7367.9	4.85	315.60	7357.2	185.4	-181.6	0.00	0.00	0.0	
5	7853.3	0.00	0.00	7842.0	200.1	-196.0	1.00	180.00	-193.5	
6	11986.9	0.00	0.00	11975.6	200.1	-196.0	0.00	0.00	0.0	
7	12731.1	89.31	179.59	12453.0	-271.6	-192.6	12.00	179.59	277.8	TGT#1(BkBear 36 ST #705H)
8	14054.5	89.31	179.59	12469.0	-1594.8	-183.1	0.00	0.00	1600.0	
9	14057.8	89.38	179.59	12469.0	-1598.2	-183.1	2.00	-0.84	1603.4	
10	15705.9	89.38	179.59	12487.0	-3246.1	-171.2	0.00	0.00	3250.0	TGT#2(BkBear 36 ST #705H)
11	15709.6	89.45	179.59	12487.0	-3249.8	-171.2	2.00	0.00	3253.7	
12	17264.9	89.45	179.59	12502.0	-4805.0	-160.0	0.00	0.00	4807.7	PBHL(BkBear 36 ST #705H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP(BkBear 36 ST #705H)	12453.0	-82.0	-194.0	398668.00	751398.00
TGT#1(BkBear 36 ST #705H)	12469.0	-1594.8	-183.1	397073.20	751408.89
TGT#2(BkBear 36 ST #705H)	12487.0	-3246.1	-171.2	395421.80	751420.78
PBHL(BkBear 36 ST #705H)	12502.0	-4805.0	-160.0	393865.00	751432.00





EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Black Bear 36 State

#705H

OH

Design: OH

PVA Report

10 July, 2017



EOG Resources

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3354.0usft (H&P 466)
Site:	Black Bear 36 State	MD Reference:	KB = 25 @ 3354.0usft (H&P 466)
Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 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	Black Bear 36 State		
Site Position:		Northing:	398,659.00 usft
From:	Map	Easting:	750,659.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 5' 36.397 N
		Longitude:	103° 31' 26.155 W
		Grid Convergence:	0.43 °

Well	#705H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			0.0 usft
			Latitude:
			32° 5' 36.416 N
			Longitude:
			103° 31' 15.309 W
			Ground Level:
			3,329.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	5/22/2017	6.93
			Dip Angle (°)
			59.95
			Field Strength (nT)
			47,873.85625779

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 (°)
			181.91

Survey Program	Date 7/10/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
1,351.0	17,238.0	QES MWD #1 (OH)	MWD
			Description
			MWD - Standard

EOG Resources

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Black Bear 36 State
Well: #705H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #705H
TVD Reference: KB = 25 @ 3354.0usft (H&P 466)
MD Reference: KB = 25 @ 3354.0usft (H&P 466)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 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)
1,201.0	0.70	133.95	1,201.0	1.6	3.4	0.00	0.00	0.00	-1.4	3.6
1,351.0	0.60	160.20	1,351.0	0.2	4.4	0.21	-0.07	17.50	-1.3	4.2
1,541.0	0.70	147.80	1,540.9	-1.7	5.3	0.09	0.05	-6.53	-4.3	3.6
1,731.0	0.90	148.50	1,730.9	-3.9	6.7	0.11	0.11	0.37	-6.9	3.7
1,920.0	1.10	331.30	1,919.9	-3.6	6.6	1.06	0.11	-93.76	6.4	-4.1
2,110.0	1.20	326.50	2,109.9	-0.4	4.7	0.07	0.05	-2.53	2.9	-3.7
2,300.0	1.20	325.80	2,299.8	3.0	2.4	0.01	0.00	-0.37	-1.1	-3.7
2,490.0	1.30	340.80	2,489.8	6.6	0.6	0.18	0.05	7.89	-6.1	-2.8
2,680.0	0.30	144.80	2,679.8	8.3	0.2	0.84	-0.53	86.32	6.6	4.9
2,870.0	0.60	108.90	2,869.8	7.5	1.4	0.21	0.16	-18.89	1.1	7.6
3,060.0	1.10	90.40	3,059.7	7.2	4.2	0.30	0.26	-9.74	-4.1	7.2
3,250.0	1.90	116.30	3,249.7	5.8	8.8	0.54	0.42	13.63	-5.4	9.1
3,440.0	1.50	165.70	3,439.6	2.0	12.3	0.77	-0.21	26.00	-1.1	12.4
3,630.0	2.40	219.10	3,629.5	-3.5	10.4	1.01	0.47	28.11	3.8	10.3
3,820.0	1.70	271.30	3,819.4	-6.5	5.1	1.01	-0.37	27.47	5.2	6.4
4,010.0	0.60	313.20	4,009.4	-5.8	1.5	0.69	-0.58	22.05	5.1	3.2
4,201.0	2.30	299.80	4,200.3	-3.2	-2.5	0.90	0.89	-7.02	1.1	4.5
4,391.0	2.80	312.10	4,390.1	1.8	-9.3	0.39	0.26	6.47	1.5	5.5
4,581.0	4.70	330.60	4,579.7	11.7	-16.6	1.17	1.00	9.74	4.5	2.6
4,770.0	3.30	340.20	4,768.2	23.6	-22.2	0.82	-0.74	5.08	6.4	-3.6
4,961.0	5.00	316.50	4,958.7	34.8	-29.8	1.25	0.89	-12.41	10.1	-3.2
5,150.0	5.90	313.70	5,146.9	47.5	-42.5	0.50	0.48	-1.48	8.3	-2.6
5,340.0	6.30	314.00	5,335.8	61.4	-57.1	0.21	0.21	0.16	4.1	-2.1
5,530.0	6.80	316.90	5,524.6	76.9	-72.2	0.32	0.26	1.53	-1.6	-2.2
5,720.0	6.20	317.20	5,713.3	92.6	-86.9	0.32	-0.32	0.16	-7.1	-2.6
5,910.0	5.90	317.00	5,902.3	107.3	-100.5	0.16	-0.16	-0.11	-11.0	-3.0
6,099.0	5.40	315.60	6,090.4	120.8	-113.4	0.27	-0.26	-0.74	-13.6	-3.5

EOG Resources

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Black Bear 36 State
 Well: #705H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #705H
 TVD Reference: KB = 25 @ 3354.0usft (H&P 466)
 MD Reference: KB = 25 @ 3354.0usft (H&P 466)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14 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)
6,289.0	5.20	315.10	6,279.6	133.3	-125.7	0.11	-0.11	-0.26	-15.0	-3.6
6,479.0	4.60	313.90	6,468.9	144.6	-137.3	0.32	-0.32	-0.63	-15.1	-3.6
6,669.0	4.80	312.30	6,658.2	155.3	-148.6	0.13	0.11	-0.84	-14.5	-3.3
6,859.0	4.80	312.30	6,847.6	166.0	-160.4	0.00	0.00	0.00	-14.4	-2.4
7,049.0	4.80	314.20	7,036.9	176.9	-172.0	0.08	0.00	1.00	-14.3	-1.2
7,239.0	4.50	309.80	7,226.3	187.2	-183.4	0.25	-0.16	-2.32	-13.5	-1.3
7,429.0	2.80	334.00	7,415.9	196.1	-191.2	1.19	-0.89	12.74	-9.3	2.4
7,619.0	0.30	74.30	7,605.8	200.4	-192.7	1.51	-1.32	52.79	-0.9	3.7
7,809.0	0.90	142.30	7,795.8	199.4	-191.3	0.44	0.32	35.79	-3.2	3.2
7,999.0	1.10	169.90	7,985.8	196.4	-190.1	0.27	0.11	14.53	-4.7	5.2
8,190.0	1.90	163.80	8,176.7	191.6	-188.9	0.43	0.42	-3.19	-10.2	4.4
8,380.0	0.90	242.30	8,366.7	187.8	-189.3	1.02	-0.53	41.32	0.2	14.0
8,570.0	0.70	235.50	8,556.6	186.5	-191.6	0.12	-0.11	-3.58	-4.1	13.7
8,760.0	0.60	224.20	8,746.6	185.1	-193.3	0.09	-0.05	-5.95	-8.8	12.4
8,950.0	0.30	314.00	8,936.6	184.8	-194.3	0.35	-0.16	47.26	11.9	9.9
9,140.0	0.40	335.70	9,126.6	185.7	-194.9	0.09	0.05	11.42	13.6	5.0
9,330.0	0.90	348.70	9,316.6	187.8	-195.5	0.27	0.26	6.84	12.2	1.9
9,520.0	1.10	328.30	9,506.6	190.8	-196.8	0.21	0.11	-10.74	7.5	5.6
9,710.0	1.30	328.30	9,696.5	194.2	-198.9	0.11	0.11	0.00	3.6	5.6
9,900.0	0.40	8.70	9,886.5	196.7	-199.9	0.54	-0.47	21.26	4.0	3.3
10,089.0	0.90	325.80	10,075.5	198.5	-200.6	0.35	0.26	-22.70	-1.3	4.7
10,281.0	1.70	269.40	10,267.5	199.8	-204.3	0.74	0.42	-29.37	-8.3	0.3
10,471.0	1.40	119.10	10,457.4	198.6	-205.1	1.58	-0.16	-79.11	7.2	-5.8
10,660.0	1.80	142.80	10,646.4	195.1	-201.3	0.40	0.21	12.54	-0.8	-7.2
10,850.0	1.10	216.10	10,836.3	191.3	-200.6	0.96	-0.37	38.58	-9.8	1.5
11,040.0	0.60	287.90	11,026.3	190.1	-202.6	0.57	-0.26	37.79	-3.2	11.6
11,230.0	0.40	341.60	11,216.3	191.0	-203.7	0.26	-0.11	28.26	6.2	10.2

EOG Resources

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Black Bear 36 State
 Well: #705H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #705H
 TVD Reference: KB = 25 @ 3354.0usft (H&P 466)
 MD Reference: KB = 25 @ 3354.0usft (H&P 466)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14 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)
11,420.0	0.60	16.60	11,406.3	192.6	-203.7	0.19	0.11	18.42	9.4	5.2
11,610.0	2.60	287.90	11,596.2	194.9	-207.5	1.40	1.05	-46.68	-9.3	8.5
11,781.0	3.30	290.50	11,767.0	197.8	-215.8	0.42	0.41	1.52	-17.7	9.1
11,875.0	3.00	299.20	11,860.8	200.0	-220.5	0.60	-0.32	9.26	-21.3	12.1
11,922.0	2.80	303.40	11,907.8	201.2	-222.5	0.62	-0.43	8.94	-22.7	13.7
11,969.0	1.20	300.00	11,954.8	202.1	-223.9	3.41	-3.40	-7.23	-25.1	12.3
12,017.0	6.50	177.70	12,002.7	199.6	-224.2	15.03	11.04	-254.79	1.4	-28.2
12,064.0	16.80	178.10	12,048.6	190.1	-223.9	21.92	21.91	0.85	-3.4	-28.0
12,112.0	26.90	175.30	12,093.1	172.3	-222.8	21.15	21.04	-5.83	-10.4	-27.8
12,159.0	29.60	172.30	12,134.5	150.2	-220.3	6.49	5.74	-6.38	-18.0	-27.0
12,207.0	32.40	170.50	12,175.7	125.8	-216.6	6.14	5.83	-3.75	-24.1	-24.8
12,254.0	38.30	175.10	12,214.0	98.8	-213.3	13.76	12.55	9.79	-30.7	-20.1
12,302.0	45.00	182.30	12,249.9	67.0	-212.7	17.13	13.96	15.00	-37.7	-16.4
12,349.0	48.70	183.20	12,282.0	32.7	-214.4	8.00	7.87	1.91	-42.3	-17.7
12,397.0	51.90	181.10	12,312.7	-4.1	-215.7	7.47	6.67	-4.37	-43.8	-20.5
12,444.0	56.80	177.70	12,340.0	-42.3	-215.3	11.97	10.43	-7.23	-43.4	-21.8
12,492.0	58.70	176.30	12,365.7	-82.9	-213.2	4.66	3.96	-2.92	-41.0	-20.3
12,494.5	58.88	176.29	12,366.9	-85.0	-213.0	7.03	7.02	-0.44	-40.8	-20.2
HL Crossing, MD:12494.5', TVD:12366.9', N/S:-85.0', E/W:-213.0', INC:58.88										
12,539.0	62.00	176.10	12,388.9	-123.6	-210.5	7.03	7.02	-0.42	-36.0	-17.7
12,587.0	66.90	175.80	12,409.6	-166.8	-207.4	10.22	10.21	-0.62	-29.3	-14.7
12,634.0	73.00	174.70	12,425.7	-210.8	-203.7	13.16	12.98	-2.34	-22.3	-11.1
12,682.0	75.20	175.10	12,438.9	-256.7	-199.6	4.65	4.58	0.83	-13.6	-7.1
12,729.0	83.80	174.70	12,447.4	-302.7	-195.5	18.32	18.30	-0.85	-6.0	-3.1
12,777.0	93.80	175.40	12,448.4	-350.5	-191.4	20.88	20.83	1.46	-5.6	0.7
12,882.0	92.90	177.70	12,442.3	-455.1	-185.1	2.35	-0.86	2.19	-13.0	6.2
12,977.0	91.40	178.20	12,438.7	-550.0	-181.7	1.66	-1.58	0.53	-17.7	8.9

EOG Resources

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3354.0usft (H&P 466)
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13,073.0	90.30	179.30	12,437.3	-645.9	-179.6	1.62	-1.15	1.15	-20.3	10.3	
13,168.0	89.20	179.80	12,437.7	-740.9	-178.8	1.27	-1.16	0.53	-21.0	10.4	
13,263.0	89.30	180.40	12,438.9	-835.9	-179.0	0.64	0.11	0.63	-20.9	9.6	
13,358.0	89.10	179.30	12,440.3	-930.9	-178.8	1.18	-0.21	-1.16	-20.7	9.1	
13,453.0	90.80	180.20	12,440.4	-1,025.9	-178.3	2.02	1.79	0.95	-21.8	8.9	
13,548.0	89.70	180.40	12,439.9	-1,120.9	-178.8	1.18	-1.16	0.21	-23.3	7.7	
13,643.0	87.50	178.80	12,442.3	-1,215.9	-178.2	2.86	-2.32	-1.68	-22.2	7.6	
13,738.0	88.20	180.70	12,445.8	-1,310.8	-177.8	2.13	0.74	2.00	-19.7	7.4	
13,833.0	88.70	180.40	12,448.4	-1,405.7	-178.7	0.61	0.53	-0.32	-18.3	5.8	
13,928.0	90.70	183.00	12,448.9	-1,500.7	-181.5	3.45	2.11	2.74	-19.0	2.3	
14,023.0	90.30	182.50	12,448.1	-1,595.6	-186.1	0.67	-0.42	-0.53	-20.9	-2.9	
14,118.0	85.50	179.50	12,451.5	-1,690.5	-187.7	5.96	-5.05	-3.16	-18.5	-5.3	
14,213.0	88.50	177.90	12,456.5	-1,785.3	-185.6	3.58	3.16	-1.68	-14.6	-3.8	
14,308.0	88.40	177.90	12,459.1	-1,880.2	-182.1	0.11	-0.11	0.00	-13.0	-1.0	
14,403.0	91.50	178.10	12,459.2	-1,975.1	-178.8	3.27	3.26	0.21	-14.0	1.6	
14,498.0	91.40	180.50	12,456.8	-2,070.1	-177.6	2.53	-0.11	2.53	-17.4	2.1	
14,593.0	90.90	182.50	12,454.9	-2,165.0	-180.1	2.17	-0.53	2.11	-20.4	-1.1	
14,688.0	86.60	180.90	12,456.9	-2,259.9	-182.9	4.83	-4.53	-1.68	-19.3	-4.6	
14,783.0	86.30	180.50	12,462.8	-2,354.7	-184.1	0.53	-0.32	-0.42	-14.5	-6.4	
14,878.0	86.60	178.90	12,468.7	-2,449.6	-183.6	1.71	0.32	-1.68	-9.6	-6.6	
14,973.0	86.80	177.20	12,474.2	-2,544.3	-180.3	1.80	0.21	-1.79	-5.2	-4.1	
15,068.0	89.20	176.30	12,477.5	-2,639.1	-175.0	2.70	2.53	-0.95	-2.9	0.6	
15,163.0	90.80	176.50	12,477.5	-2,733.9	-169.0	1.70	1.68	0.21	-3.9	5.9	
15,258.0	88.70	174.20	12,477.9	-2,828.6	-161.3	3.28	-2.21	-2.42	-4.6	12.9	
15,353.0	93.70	175.10	12,475.9	-2,923.1	-152.4	5.35	5.26	0.95	-7.5	21.1	
15,449.0	96.90	176.50	12,467.0	-3,018.5	-145.4	3.64	3.33	1.46	-17.3	27.6	
15,480.0	97.30	176.80	12,463.2	-3,049.2	-143.6	1.61	1.29	0.97	-21.4	29.2	

EOG Resources

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3354.0usft (H&P 466)
Site:	Black Bear 36 State	MD Reference:	KB = 25 @ 3354.0usft (H&P 466)
Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 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)
15,512.0	97.70	177.00	12,459.0	-3,080.8	-141.9	1.40	1.25	0.62	-25.9	30.7
15,544.0	96.20	179.30	12,455.2	-3,112.6	-140.9	8.54	-4.69	7.19	-30.3	31.4
15,575.0	94.50	180.50	12,452.3	-3,143.5	-140.8	6.70	-5.48	3.87	-33.6	31.2
15,607.0	92.00	182.30	12,450.5	-3,175.4	-141.6	9.62	-7.81	5.62	-35.8	30.1
15,639.0	89.80	184.00	12,450.0	-3,207.3	-143.4	8.69	-6.87	5.31	-36.6	28.1
15,670.0	89.40	183.90	12,450.2	-3,238.3	-145.5	1.33	-1.29	-0.32	-36.8	25.7
15,702.0	91.20	183.20	12,450.0	-3,270.2	-147.5	6.04	5.62	-2.19	-37.2	23.5
15,734.0	90.60	181.80	12,449.5	-3,302.2	-148.9	4.76	-1.87	-4.37	-38.0	21.9
15,766.0	90.10	180.40	12,449.3	-3,334.2	-149.5	4.65	-1.56	-4.37	-38.5	21.1
15,797.0	90.20	179.80	12,449.2	-3,365.2	-149.6	1.96	0.32	-1.94	-38.9	20.8
15,829.0	90.30	177.90	12,449.1	-3,397.1	-148.9	5.95	0.31	-5.94	-39.4	21.2
15,861.0	89.30	178.10	12,449.2	-3,429.1	-147.8	3.19	-3.12	0.62	-39.6	22.1
15,892.0	90.00	179.50	12,449.4	-3,460.1	-147.2	5.05	2.26	4.52	-39.7	22.5
15,924.0	90.10	180.00	12,449.4	-3,492.1	-147.0	1.59	0.31	1.56	-40.0	22.4
15,956.0	89.30	179.50	12,449.5	-3,524.1	-146.9	2.95	-2.50	-1.56	-40.2	22.3
15,987.0	88.30	181.90	12,450.2	-3,555.1	-147.3	8.39	-3.23	7.74	-39.8	21.8
16,019.0	87.10	183.20	12,451.5	-3,587.0	-148.7	5.53	-3.75	4.06	-38.8	20.1
16,051.0	85.10	184.60	12,453.6	-3,618.9	-150.9	7.62	-6.25	4.37	-36.9	17.7
16,082.0	85.10	184.70	12,456.3	-3,649.7	-153.4	0.32	0.00	0.32	-34.6	15.0
16,114.0	85.20	184.90	12,459.0	-3,681.5	-156.0	0.70	0.31	0.62	-32.2	12.1
16,146.0	84.80	185.40	12,461.8	-3,713.2	-158.9	2.00	-1.25	1.56	-29.7	9.0
16,177.0	84.90	184.00	12,464.6	-3,744.0	-161.4	4.51	0.32	-4.52	-27.2	6.3
16,209.0	84.30	183.50	12,467.6	-3,775.8	-163.5	2.44	-1.87	-1.56	-24.5	3.9
16,227.0	83.90	182.50	12,469.4	-3,793.6	-164.4	5.96	-2.22	-5.56	-22.8	2.9
16,259.0	83.60	181.60	12,472.9	-3,825.4	-165.6	2.95	-0.94	-2.81	-19.7	1.5
16,290.0	85.40	180.90	12,475.9	-3,856.3	-166.2	6.23	5.81	-2.26	-17.0	0.6
16,322.0	91.20	181.60	12,476.8	-3,888.2	-166.9	18.26	18.12	2.19	-16.4	-0.3

EOG Resources

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3354.0usft (H&P 466)
Site:	Black Bear 36 State	MD Reference:	KB = 25 @ 3354.0usft (H&P 466)
Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 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)	
16,354.0	94.90	181.80	12,475.1	-3,920.2	-167.9	11.58	11.56	0.62	-18.4	-1.5	
16,385.0	93.20	181.20	12,472.9	-3,951.1	-168.7	5.81	-5.48	-1.94	-20.9	-2.6	
16,417.0	94.00	181.60	12,470.9	-3,983.0	-169.5	2.79	2.50	1.25	-23.2	-3.6	
16,449.0	94.20	181.60	12,468.6	-4,014.9	-170.4	0.62	0.62	0.00	-25.8	-4.7	
16,480.0	91.30	181.20	12,467.1	-4,045.9	-171.1	9.44	-9.35	-1.29	-27.5	-5.7	
16,512.0	88.60	181.60	12,467.2	-4,077.9	-171.9	8.53	-8.44	1.25	-27.8	-6.7	
16,544.0	89.00	181.80	12,467.8	-4,109.8	-172.9	1.40	1.25	0.62	-27.5	-7.8	
16,576.0	89.60	181.80	12,468.2	-4,141.8	-173.9	1.87	1.87	0.00	-27.4	-9.1	
16,623.0	90.60	181.90	12,468.2	-4,188.8	-175.4	2.14	2.13	0.21	-27.9	-10.9	
16,671.0	89.90	181.90	12,467.9	-4,236.8	-177.0	1.46	-1.46	0.00	-28.6	-12.9	
16,718.0	88.50	180.20	12,468.6	-4,283.8	-177.8	4.69	-2.98	-3.62	-28.4	-14.1	
16,766.0	89.60	180.50	12,469.4	-4,331.7	-178.1	2.38	2.29	0.62	-28.1	-14.7	
16,813.0	90.60	181.10	12,469.3	-4,378.7	-178.8	2.48	2.13	1.28	-28.6	-15.7	
16,861.0	90.80	181.10	12,468.7	-4,426.7	-179.7	0.42	0.42	0.00	-29.6	-17.0	
16,908.0	88.80	179.60	12,468.9	-4,473.7	-180.0	5.32	-4.26	-3.19	-29.9	-17.6	
16,955.0	89.40	180.70	12,469.6	-4,520.7	-180.1	2.67	1.28	2.34	-29.6	-18.1	
17,002.0	89.70	179.60	12,470.0	-4,567.7	-180.2	2.43	0.64	-2.34	-29.7	-18.5	
17,050.0	87.70	176.50	12,471.1	-4,615.7	-178.6	7.68	-4.17	-6.46	-29.1	-17.3	
17,097.0	88.70	177.00	12,472.6	-4,662.6	-175.9	2.38	2.13	1.06	-28.1	-14.9	
17,139.5	90.12	177.80	12,473.0	-4,705.0	-174.0	3.82	3.33	1.88	-28.0	-13.3	
HL Crossing, MD:17139.5', TVD:12473.0', N/S:-4705.0', E/W:-174.0', INC:90.12											
17,145.0	90.30	177.90	12,473.0	-4,710.5	-173.8	3.82	3.33	1.87	-28.1	-13.1	
17,193.0	92.00	179.30	12,472.0	-4,758.5	-172.6	4.59	3.54	2.92	-29.5	-12.3	
Final MWD Survey (MD= 17193.0')											
17,238.0	92.00	179.30	12,470.5	-4,803.5	-172.1	0.00	0.00	0.00	-31.5	-12.1	
Final Projection to Bit (MD=17238.0')											

EOG Resources

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Black Bear 36 State
Well: #705H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #705H
TVD Reference: KB = 25 @ 3354.0usft (H&P 466)
MD Reference: KB = 25 @ 3354.0usft (H&P 466)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,494.5	12,366.9	-85.0	-213.0	HL Crossing, MD:12494.5', TVD:12366.9', N/S:-85.0', E/W:-213.0', INC:58.88
17,139.5	12,473.0	-4,705.0	-174.0	HL Crossing, MD:17139.5', TVD:12473.0', N/S:-4705.0', E/W:-174.0', INC:90.12
17,193.0	12,472.0	-4,758.5	-172.6	Final MWD Survey (MD= 17193.0')
17,238.0	12,470.5	-4,803.5	-172.1	Final Projection to Bit (MD=17238.0')

Checked By: _____ Approved By: _____ Date: _____