



HOBBS OCD

OCT 20 2017

RECEIVED

Lea County, NM (NAD 83 NME)

Calm Breeze 2 Fed Com

#704H

H&P 621

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: -0.42°
Magnetic North: 6.54°
Magnetic Field
Strength: 47868.7mT
Dip Angle: 59.93°
Date: 4/12/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.54°
To convert a Magnetic Direction to a True Direction, Add 6.95° East
To convert a True Direction to a Grid Direction, Subtract 6.42°

WELL DETAILS: #704H

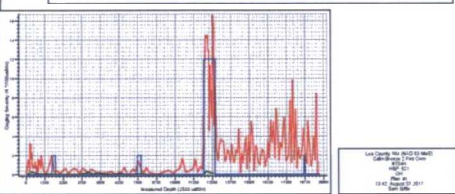
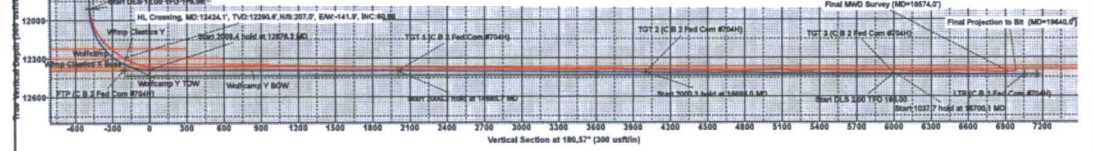
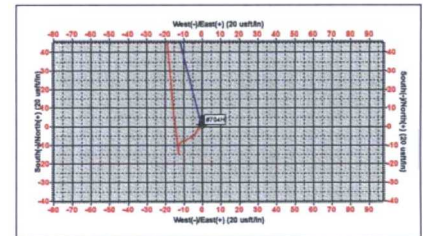
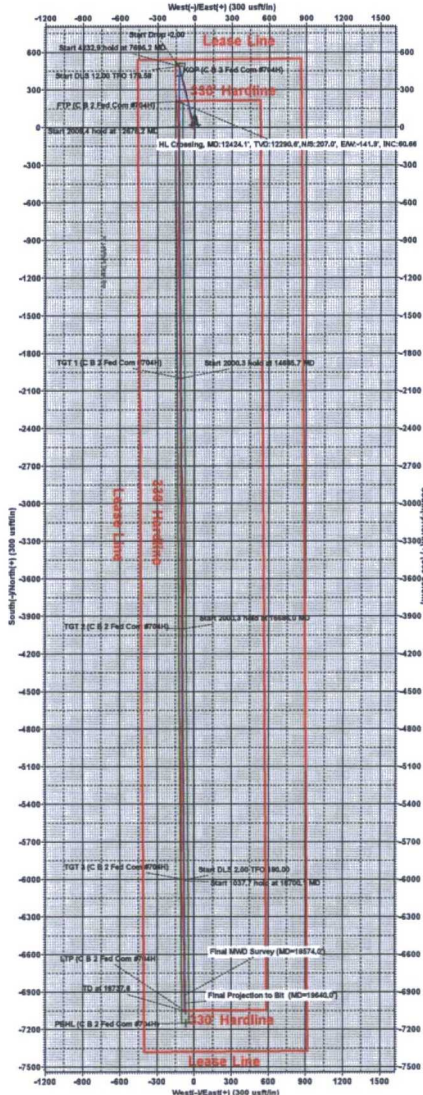
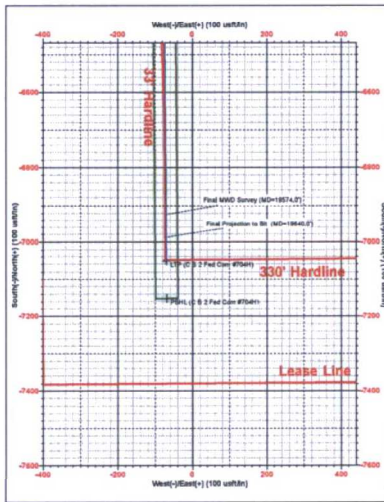
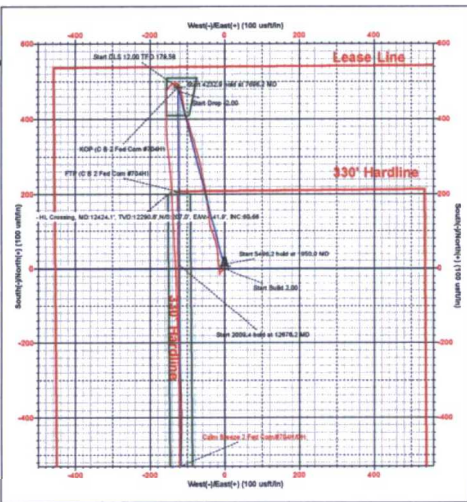
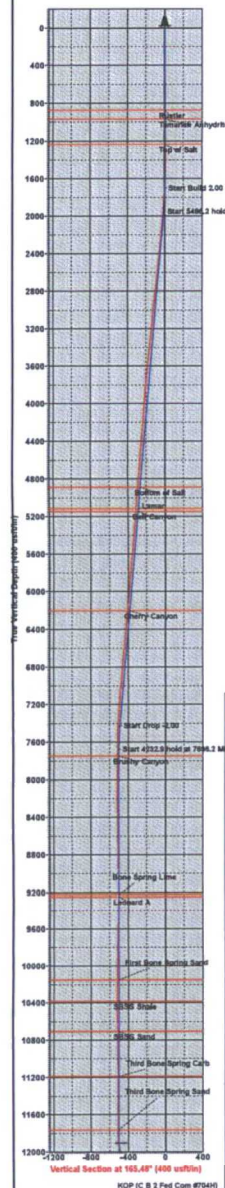
Ground Level: 3317.0
KB = 25 @ 3342.0m (H&P 621)
Easting: 783916.00
Northing: 390451.00
Latitude: 32° 4' 15.635 N
Longitude: 103° 33' 0.714 W
Slot

SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1700.0	0.00	0.00	1700.0	0.0	0.0	0.00	0.00	0.0	
1950.0	5.00	345.48	1949.7	10.6	-2.7	2.00	345.48	-10.5	
7446.2	5.00	345.48	7425.0	474.3	-122.8	0.00	0.00	-473.0	
7696.2	0.00	0.00	7674.7	484.8	-125.6	2.00	180.00	-483.6	
11929.1	0.00	0.00	11907.5	484.8	-125.6	0.00	0.00	-483.6	
12676.2	89.66	179.58	12385.0	10.2	-122.1	12.00	179.58	-9.0	
14685.7	89.66	179.58	12397.0	-1999.1	-107.2	0.00	0.00	2000.1	TGT 1 (C B 2 Fed Com #704H)
16686.0	89.66	179.58	12409.0	-3999.3	-92.3	0.00	0.00	4000.0	TGT 2 (C B 2 Fed Com #704H)
18686.2	89.66	179.58	12421.0	-5999.5	-77.5	0.00	0.00	6000.0	TGT 3 (C B 2 Fed Com #704H)
18700.1	89.38	179.58	12421.1	-6013.3	-77.4	2.00	180.00	6013.8	
19737.8	89.38	179.58	12432.3	-7051.0	-69.7	0.00	0.00	7051.3	LTP (C B 2 Fed Com #704H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
KOP (C B 2 Fed Com #704H)	11907.5	484.8	-125.6	390935.83	783780.43	Polygon
FTP (C B 2 Fed Com #704H)	12385.0	207.0	-123.0	390658.00	783793.00	Point
TGT 1 (C B 2 Fed Com #704H)	12397.0	-1999.1	-107.2	388451.80	783808.83	Point
TGT 2 (C B 2 Fed Com #704H)	12409.0	-3999.3	-92.3	388451.70	783823.65	Point
TGT 3 (C B 2 Fed Com #704H)	12421.0	-5999.5	-77.5	384451.60	783838.47	Point
LTP (C B 2 Fed Com #704H)	12432.3	-7051.0	-69.7	383400.00	783846.26	Point
PBHL (C B 2 Fed Com #704H)	12433.0	-7181.0	-69.0	383300.00	783847.00	Rectangle (Sides: L0.0 W0.0)



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Calm Breeze 2 Fed Com

#704H

OH

Design: OH

PVA Report

07 August, 2017

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Site:	Calm Breeze 2 Fed Com	MD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Well:	#704H	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	Calm Breeze 2 Fed Com		
Site Position:		Northing:	390,451.00 usft
From:	Map	Easting:	783,916.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 4' 15.635 N
		Longitude:	103° 33' 0.714 W
		Grid Convergence:	0.42 °

Well	#704H		
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° 4' 15.635 N
		Longitude:	103° 33' 0.714 W
		Ground Level:	3,317.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	4/12/2017	6.95
			Dip Angle (°)
			59.93
			Field Strength (nT)
			47,868.71637044

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 (°)
			180.55

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Calm Breeze 2 Fed Com
 Well: #704H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #704H
 TVD Reference: KB = 25 @ 3342.0usft (H&P 621)
 MD Reference: KB = 25 @ 3342.0usft (H&P 621)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey Program		Date 8/7/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
131.0	1,008.0	Invictus MWD (OH)	MWD	MWD - Standard
1,159.0	19,640.0	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	0.0
131.0	1.70	236.50	131.0	-1.1	-1.6	1.30	1.30	0.00	-1.9	0.0	0.0
188.0	1.60	205.50	188.0	-2.3	-2.7	1.56	-0.18	-54.39	-3.2	-1.4	-1.4
218.0	1.30	200.50	217.9	-3.0	-3.0	1.08	-1.00	-16.67	-3.8	-1.7	-1.7
246.0	1.40	202.50	245.9	-3.6	-3.2	0.39	0.36	7.14	-4.5	-1.6	-1.6
275.0	1.70	236.50	274.9	-4.1	-3.7	3.28	1.03	117.24	-5.4	1.4	1.4
304.0	0.80	231.50	303.9	-4.5	-4.2	3.12	-3.10	-17.24	-6.1	0.9	0.9
332.0	1.30	207.50	331.9	-4.9	-4.5	2.34	1.79	-85.71	-6.4	-1.7	-1.7
363.0	1.40	228.50	362.9	-5.5	-5.0	1.62	0.32	67.74	-7.3	0.8	0.8
394.0	1.10	249.50	393.9	-5.8	-5.5	1.75	-0.97	67.74	-7.2	3.5	3.5
425.0	0.80	251.50	424.9	-6.0	-6.0	0.97	-0.97	6.45	-7.6	3.8	3.8
456.0	1.00	253.50	455.9	-6.1	-6.5	0.65	0.65	6.45	-8.0	4.0	4.0
487.0	1.10	237.50	486.9	-6.4	-7.0	1.00	0.32	-51.61	-9.3	1.6	1.6
582.0	0.50	259.50	581.9	-6.9	-8.2	0.70	-0.63	23.16	-9.3	5.3	5.3
613.0	0.70	223.50	612.9	-7.1	-8.4	1.34	0.65	-116.13	-11.0	-1.2	-1.2
645.0	0.90	236.50	644.9	-7.4	-8.8	0.84	0.62	40.62	-11.4	1.3	1.3
676.0	0.70	241.50	675.9	-7.6	-9.1	0.68	-0.65	16.13	-11.7	2.3	2.3
707.0	0.80	249.50	706.9	-7.8	-9.5	0.47	0.32	25.81	-11.6	3.9	3.9
738.0	0.80	269.50	737.9	-7.8	-9.9	0.90	0.00	64.52	-10.0	7.8	7.8
770.0	0.80	274.50	769.9	-7.8	-10.4	0.22	0.00	15.62	-9.7	8.6	8.6
802.0	0.30	259.50	801.9	-7.8	-10.7	1.61	-1.56	-46.87	-11.9	5.8	5.8

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Site:	Calm Breeze 2 Fed Com	MD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Well:	#704H	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)
833.0	0.30	238.50	832.9	-7.9	-10.8	0.35	0.00	-67.74	-13.4	1.1
865.0	0.80	242.50	864.9	-8.0	-11.1	1.57	1.56	12.50	-13.6	2.0
897.0	0.40	213.50	896.9	-8.2	-11.4	1.53	-1.25	-90.62	-13.1	-4.9
928.0	0.80	211.50	927.9	-8.5	-11.5	1.29	1.29	-6.45	-13.3	-5.4
990.0	0.40	204.50	989.9	-9.1	-11.8	0.65	-0.65	-11.29	-13.2	-7.0
1,008.0	0.70	224.50	1,007.9	-9.2	-12.0	1.95	1.67	111.11	-14.9	-2.1
1,159.0	0.90	180.50	1,158.8	-11.1	-12.6	0.42	0.13	-29.14	-11.2	-12.5
1,345.0	1.00	183.50	1,344.8	-14.1	-12.7	0.06	0.05	1.61	-14.9	-11.8
1,533.0	0.60	16.20	1,532.8	-14.8	-12.5	0.85	-0.21	-88.99	17.7	7.9
1,720.0	4.20	351.50	1,719.6	-7.1	-13.3	1.96	1.93	-13.21	5.1	14.2
1,908.0	4.60	354.30	1,907.1	7.2	-15.1	0.24	0.21	1.49	-1.3	13.1
2,097.0	5.40	354.60	2,095.3	23.6	-16.6	0.42	0.42	0.16	-1.7	10.6
2,284.0	5.20	355.70	2,281.5	40.8	-18.1	0.12	-0.11	0.59	-2.7	7.9
2,471.0	5.80	349.60	2,467.7	58.6	-20.4	0.45	0.32	-3.26	-5.2	5.5
2,658.0	6.00	338.00	2,653.7	76.9	-25.8	0.65	0.11	-6.20	-9.1	4.6
2,846.0	6.10	340.10	2,840.6	95.4	-32.9	0.13	0.05	1.12	-12.4	6.8
3,033.0	6.10	347.60	3,026.6	114.5	-38.4	0.43	0.00	4.01	-14.9	9.0
3,220.0	6.20	359.40	3,212.5	134.3	-40.6	0.68	0.05	6.31	-16.8	10.0
3,407.0	6.20	350.30	3,398.4	154.3	-42.5	0.53	0.00	-4.87	-22.0	4.3
3,595.0	6.20	349.70	3,585.3	174.3	-46.0	0.03	0.00	-0.32	-26.0	2.7
3,782.0	5.10	356.90	3,771.4	192.5	-48.2	0.70	-0.59	3.85	-27.9	4.0
3,970.0	4.50	349.20	3,958.8	208.1	-50.1	0.47	-0.32	-4.10	-27.4	-1.9
4,158.0	4.20	348.50	4,146.2	222.1	-52.8	0.16	-0.16	-0.37	-25.3	-3.2
4,345.0	5.20	345.40	4,332.6	237.0	-56.3	0.55	0.53	-1.66	-24.1	-4.9
4,533.0	4.40	349.10	4,519.9	252.4	-59.8	0.46	-0.43	1.97	-23.7	-3.9
4,721.0	4.80	350.30	4,707.3	267.2	-62.5	0.22	0.21	0.64	-22.5	-4.6
4,909.0	5.00	346.20	4,894.6	282.9	-65.8	0.21	0.11	-2.18	-21.8	-7.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Site:	Calm Breeze 2 Fed Com	MD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Well:	#704H	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)
5,096.0	4.70	345.90	5,081.0	298.2	-69.6	0.16	-0.16	-0.16	-21.3	-7.2
5,283.0	5.00	343.00	5,267.3	313.5	-73.9	0.21	0.16	-1.55	-20.4	-8.0
5,471.0	5.30	345.20	5,454.5	329.7	-78.5	0.19	0.16	1.17	-21.2	-6.8
5,658.0	4.90	339.80	5,640.8	345.5	-83.4	0.33	-0.21	-2.89	-20.8	-7.9
5,844.0	4.90	344.90	5,826.1	360.7	-88.3	0.23	0.00	2.74	-21.1	-5.2
6,032.0	4.90	345.40	6,013.4	376.2	-92.4	0.02	0.00	0.27	-20.8	-4.9
6,220.0	4.70	340.70	6,200.8	391.2	-96.9	0.23	-0.11	-2.50	-19.7	-5.9
6,407.0	4.70	335.30	6,387.2	405.4	-102.7	0.24	0.00	-2.89	-18.3	-5.6
6,595.0	5.40	349.30	6,574.4	421.1	-107.5	0.75	0.37	7.45	-19.1	-0.2
6,782.0	5.40	351.50	6,760.6	438.5	-110.5	0.11	0.00	1.18	-20.5	-0.9
6,970.0	5.50	350.10	6,947.7	456.1	-113.3	0.09	0.05	-0.74	-22.0	-2.9
7,157.0	4.40	347.10	7,134.0	471.9	-116.5	0.60	-0.59	-1.60	-21.6	-5.0
7,344.0	3.80	347.00	7,320.6	484.9	-119.5	0.32	-0.32	-0.05	-18.7	-5.4
7,531.0	1.70	310.30	7,507.4	492.8	-123.0	1.41	-1.12	-19.63	-7.1	-10.5
7,718.0	1.00	280.10	7,694.3	494.8	-126.7	0.52	-0.37	-16.15	-2.9	-9.7
7,890.0	1.30	278.10	7,866.3	495.4	-130.1	0.18	0.17	-1.16	-6.0	-9.8
8,076.0	0.40	189.60	8,052.3	495.0	-132.3	0.73	-0.48	-47.58	8.9	-8.3
8,264.0	0.80	162.40	8,240.2	493.1	-132.0	0.26	0.21	-14.47	9.9	-3.6
8,451.0	0.70	148.70	8,427.2	490.9	-131.0	0.11	-0.05	-7.33	8.0	-1.5
8,638.0	0.60	161.80	8,614.2	489.0	-130.1	0.10	-0.05	7.01	5.4	-3.0
8,825.0	0.60	153.20	8,801.2	487.2	-129.4	0.05	0.00	-4.60	3.8	-2.3
9,013.0	0.50	174.40	8,989.2	485.5	-128.9	0.12	-0.05	11.28	1.0	-3.2
9,200.0	0.00	88.80	9,176.2	484.7	-128.8	0.27	-0.27	0.00	0.1	3.2
9,388.0	0.70	267.50	9,364.2	484.7	-129.9	0.37	0.37	0.00	-4.4	0.0
9,575.0	1.20	315.40	9,551.2	486.0	-132.4	0.48	0.27	25.61	-5.7	4.1
9,763.0	0.90	337.10	9,739.1	488.8	-134.4	0.26	-0.16	11.54	-7.1	6.6
9,951.0	1.10	338.80	9,927.1	491.8	-135.6	0.11	0.11	0.90	-10.1	6.9

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Site:	Calm Breeze 2 Fed Com	MD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Well:	#704H	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)
10,138.0	0.20	356.10	10,114.1	493.8	-136.3	0.49	-0.48	9.25	-9.7	10.1
10,326.0	1.30	341.30	10,302.1	496.2	-137.0	0.59	0.59	-7.87	-14.4	7.2
10,513.0	2.10	212.70	10,489.0	495.3	-139.5	1.65	0.43	-68.77	1.2	-17.4
10,700.0	1.90	227.60	10,675.9	490.3	-143.7	0.30	-0.11	7.97	-9.7	-16.3
10,888.0	1.30	222.90	10,863.8	486.6	-147.4	0.33	-0.32	-2.50	-13.6	-17.2
11,074.0	2.20	218.70	11,049.8	482.3	-151.1	0.49	0.48	-2.26	-17.9	-18.4
11,262.0	1.20	244.50	11,237.7	478.6	-155.1	0.66	-0.53	13.72	-29.3	-7.1
11,363.0	0.40	62.80	11,338.7	478.4	-155.8	1.58	-0.79	176.53	29.8	8.0
11,543.0	0.83	75.33	11,518.7	479.0	-153.9	0.25	0.24	6.96	28.9	1.5
11,681.0	0.60	347.44	11,656.6	479.9	-153.1	0.73	-0.17	-63.69	-1.2	28.0
11,753.0	1.10	323.00	11,728.6	480.8	-153.6	0.84	0.69	-33.94	-13.7	24.8
11,847.0	0.90	293.60	11,822.6	481.9	-154.9	0.58	-0.21	-31.28	-25.6	14.4
11,894.0	1.00	201.60	11,869.6	481.6	-155.3	2.91	0.21	-195.74	-13.9	-26.5
11,941.0	5.40	186.10	11,916.5	479.0	-155.7	9.46	9.36	-32.98	-8.8	-29.4
11,988.0	10.90	181.10	11,963.0	472.4	-156.1	11.79	11.70	-10.64	-9.7	-30.3
12,034.0	17.30	179.10	12,007.6	461.2	-156.0	13.95	13.91	-4.35	-12.2	-30.7
12,081.0	24.10	179.00	12,051.6	444.6	-155.8	14.47	14.47	-0.21	-16.6	-30.7
12,129.0	30.90	180.30	12,094.1	422.5	-155.6	14.22	14.17	2.71	-22.4	-30.4
12,176.0	37.70	180.10	12,132.9	396.0	-155.7	14.47	14.47	-0.43	-28.1	-30.7
12,222.0	43.50	178.20	12,167.8	366.1	-155.3	12.89	12.61	-4.13	-33.4	-31.3
12,269.0	48.90	174.30	12,200.4	332.2	-153.0	12.95	11.49	-8.30	-37.9	-31.2
12,316.0	50.90	173.20	12,230.6	296.5	-149.1	4.62	4.26	-2.34	-41.8	-28.0
12,363.0	56.00	175.10	12,258.6	259.0	-145.2	11.33	10.85	4.04	-44.5	-23.4
12,409.0	59.70	177.00	12,283.1	220.1	-142.6	8.77	8.04	4.13	-45.3	-20.0
12,424.1	60.66	177.16	12,290.6	207.0	-141.9	6.45	6.38	1.08	-45.1	-19.3
HL Crossing, MD:12424.1', TVD:12290.6',N/S:207.0', E/W:-141.9', INC:60.66										
12,456.0	62.70	177.50	12,305.7	179.0	-140.6	6.45	6.38	1.05	-43.5	-18.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Site:	Calm Breeze 2 Fed Com	MD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Well:	#704H	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)
12,502.0	65.40	177.30	12,325.9	137.7	-138.7	5.88	5.87	-0.43	-39.0	-16.3
12,549.0	73.10	176.10	12,342.5	93.8	-136.2	16.56	16.38	-2.55	-33.8	-14.0
12,596.0	80.50	176.50	12,353.2	48.2	-133.2	15.77	15.74	0.85	-29.8	-11.1
12,643.0	82.70	177.50	12,360.1	1.8	-130.8	5.13	4.68	2.13	-24.9	-8.9
12,719.0	89.50	179.20	12,365.3	-74.0	-128.6	9.22	8.95	2.24	-20.2	-7.2
12,813.0	90.60	177.00	12,365.2	-167.9	-125.5	2.62	1.17	-2.34	-20.9	-4.8
12,906.0	89.80	175.90	12,364.9	-260.7	-119.8	1.46	-0.86	-1.18	-21.8	0.3
13,000.0	89.70	178.80	12,365.3	-354.6	-115.4	3.09	-0.11	3.09	-21.9	3.9
13,094.0	91.30	181.90	12,364.4	-448.6	-116.0	3.71	1.70	3.30	-23.3	2.7
13,187.0	94.40	182.80	12,359.8	-541.4	-119.8	3.47	3.33	0.97	-28.5	-1.8
13,281.0	91.30	181.90	12,355.2	-635.2	-123.6	3.43	-3.30	-0.96	-33.7	-6.4
13,374.0	90.20	181.20	12,353.9	-728.2	-126.2	1.40	-1.18	-0.75	-35.5	-9.6
13,468.0	88.60	180.60	12,354.9	-822.1	-127.6	1.82	-1.70	-0.64	-35.1	-11.7
13,561.0	91.00	180.60	12,355.2	-915.1	-128.6	2.58	2.58	0.00	-35.3	-13.4
13,655.0	89.70	179.20	12,354.7	-1,009.1	-128.4	2.03	-1.38	-1.49	-36.4	-13.9
13,749.0	90.90	178.90	12,354.2	-1,103.1	-126.9	1.32	1.28	-0.32	-37.5	-13.1
13,843.0	88.00	178.50	12,355.1	-1,197.1	-124.7	3.11	-3.09	-0.43	-37.1	-11.6
13,936.0	89.40	178.50	12,357.2	-1,290.0	-122.3	1.51	1.51	0.00	-35.6	-9.9
14,030.0	90.50	178.20	12,357.3	-1,384.0	-119.6	1.21	1.17	-0.32	-36.1	-7.9
14,123.0	88.30	177.20	12,358.2	-1,476.9	-115.9	2.60	-2.37	-1.08	-35.6	-4.8
14,217.0	86.80	175.70	12,362.3	-1,570.6	-110.1	2.26	-1.60	-1.60	-32.2	0.3
14,311.0	89.80	179.00	12,365.1	-1,664.4	-105.7	4.74	3.19	3.51	-29.9	3.9
14,404.0	89.80	179.20	12,365.4	-1,757.4	-104.3	0.22	0.00	0.22	-30.2	4.7
14,498.0	89.10	181.20	12,366.3	-1,851.4	-104.6	2.25	-0.74	2.13	-29.8	3.7
14,591.0	90.20	181.10	12,366.8	-1,944.4	-106.5	1.19	1.18	-0.11	-29.8	1.1
14,684.0	88.00	179.40	12,368.3	-2,037.4	-106.9	2.99	-2.37	-1.83	-28.9	0.0
14,778.0	91.10	181.30	12,369.0	-2,131.3	-107.4	3.87	3.30	2.02	-28.7	-1.2

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Calm Breeze 2 Fed Com
Well: #704H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3342.0usft (H&P 621)
MD Reference: KB = 25 @ 3342.0usft (H&P 621)
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)	
14,872.0	90.70	180.90	12,367.6	-2,225.3	-109.2	0.60	-0.43	-0.43	-30.8	-3.7	
14,965.0	87.00	180.00	12,369.4	-2,318.3	-110.0	4.09	-3.98	-0.97	-29.5	-5.2	
15,059.0	88.20	179.70	12,373.4	-2,412.2	-109.7	1.32	1.28	-0.32	-26.1	-5.6	
15,153.0	92.50	176.80	12,372.8	-2,506.1	-106.9	5.52	4.57	-3.09	-27.2	-3.5	
15,247.0	88.90	177.90	12,371.6	-2,600.0	-102.5	4.00	-3.83	1.17	-28.9	0.2	
15,340.0	89.10	178.20	12,373.3	-2,692.9	-99.3	0.39	0.22	0.32	-27.9	2.7	
15,434.0	90.60	175.80	12,373.5	-2,786.8	-94.4	3.01	1.60	-2.55	-28.2	6.9	
15,528.0	88.90	177.70	12,373.9	-2,880.6	-89.1	2.71	-1.81	2.02	-28.3	11.5	
15,622.0	88.20	178.80	12,376.3	-2,974.6	-86.2	1.39	-0.74	1.17	-26.5	13.7	
15,715.0	88.70	178.00	12,378.8	-3,067.5	-83.6	1.01	0.54	-0.86	-24.6	15.6	
15,809.0	90.40	179.00	12,379.6	-3,161.4	-81.2	2.10	1.81	1.06	-24.4	17.4	
15,901.0	88.10	179.70	12,380.8	-3,253.4	-80.1	2.61	-2.50	0.76	-23.7	17.7	
15,995.0	89.70	181.10	12,382.6	-3,347.4	-80.8	2.26	1.70	1.49	-22.5	16.4	
16,089.0	90.50	181.00	12,382.4	-3,441.4	-82.5	0.86	0.85	-0.11	-23.2	14.0	
16,183.0	92.10	180.50	12,380.3	-3,535.3	-83.7	1.78	1.70	-0.53	-25.9	12.1	
16,276.0	89.00	179.60	12,379.4	-3,628.3	-83.8	3.47	-3.33	-0.97	-27.4	11.3	
16,369.0	89.70	181.10	12,380.4	-3,721.3	-84.4	1.78	0.75	1.61	-26.9	10.0	
16,462.0	84.70	179.50	12,385.0	-3,814.2	-84.9	5.64	-5.38	-1.72	-22.9	8.9	
16,556.0	87.80	180.30	12,391.1	-3,908.0	-84.7	3.41	3.30	0.85	-17.3	8.3	
16,649.0	92.80	181.10	12,390.6	-4,000.9	-85.8	5.44	5.38	0.86	-18.4	6.5	
16,742.0	91.20	181.00	12,387.4	-4,093.8	-87.6	1.72	-1.72	-0.11	-22.2	4.1	
16,836.0	84.80	181.70	12,390.7	-4,187.7	-89.8	6.85	-6.81	0.74	-19.5	1.2	
16,930.0	88.60	181.90	12,396.1	-4,281.5	-92.7	4.05	4.04	0.21	-14.6	-2.4	
17,023.0	89.90	181.40	12,397.3	-4,374.4	-95.4	1.50	1.40	-0.54	-13.9	-5.8	
17,117.0	88.50	178.60	12,398.6	-4,468.4	-95.4	3.33	-1.49	-2.98	-13.2	-6.5	
17,211.0	90.60	180.10	12,399.4	-4,562.4	-94.3	2.75	2.23	1.60	-13.0	-6.1	
17,303.0	86.20	179.50	12,401.9	-4,654.3	-94.0	4.83	-4.78	-0.65	-11.0	-6.5	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Site:	Calm Breeze 2 Fed Com	MD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Well:	#704H	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)
17,396.0	91.20	181.90	12,404.0	-4,747.3	-95.1	5.96	5.38	2.58	-9.4	-8.3
17,491.0	92.50	181.60	12,401.0	-4,842.2	-98.0	1.40	1.37	-0.32	-13.1	-11.9
17,584.0	93.60	180.50	12,396.0	-4,935.0	-99.7	1.67	1.18	-1.18	-18.6	-14.4
17,677.0	91.80	181.10	12,391.6	-5,027.9	-101.0	2.04	-1.94	0.65	-23.5	-16.3
17,771.0	84.60	180.30	12,394.6	-5,121.8	-102.2	7.71	-7.66	-0.85	-21.1	-18.2
17,865.0	85.60	179.70	12,402.6	-5,215.5	-102.2	1.24	1.06	-0.64	-13.6	-18.9
17,957.0	94.60	180.30	12,402.5	-5,307.4	-102.2	9.80	9.78	0.65	-14.3	-19.6
18,051.0	93.40	179.50	12,395.9	-5,401.1	-102.0	1.53	-1.28	-0.85	-21.5	-20.1
18,145.0	87.00	179.70	12,395.6	-5,495.1	-101.4	6.81	-6.81	0.21	-22.4	-20.1
18,238.0	87.60	179.60	12,399.9	-5,588.0	-100.8	0.65	0.65	-0.11	-18.5	-20.2
18,332.0	90.20	179.90	12,401.8	-5,681.9	-100.4	2.78	2.77	0.32	-17.3	-20.5
18,426.0	90.90	181.30	12,400.8	-5,775.9	-101.4	1.67	0.74	1.49	-18.8	-22.2
18,519.0	89.30	180.40	12,400.7	-5,868.9	-102.8	1.97	-1.72	-0.97	-19.5	-24.3
18,612.0	91.80	179.10	12,399.8	-5,961.9	-102.3	3.03	2.69	-1.40	-21.0	-24.5
18,705.0	87.50	177.90	12,400.4	-6,054.8	-99.9	4.80	-4.62	-1.29	-21.2	-22.8
18,799.0	88.80	177.40	12,403.4	-6,148.7	-96.1	1.48	1.38	-0.53	-19.2	-19.6
18,893.0	88.00	176.70	12,406.0	-6,242.6	-91.2	1.13	-0.85	-0.74	-17.6	-15.5
18,986.0	93.00	178.10	12,405.2	-6,335.4	-87.0	5.58	5.38	1.51	-19.4	-12.0
19,080.0	90.10	177.90	12,402.7	-6,429.3	-83.7	3.09	-3.09	-0.21	-22.9	-9.4
19,174.0	89.30	178.10	12,403.2	-6,523.3	-80.4	0.88	-0.85	0.21	-23.5	-6.8
19,267.0	90.70	178.10	12,403.2	-6,616.2	-77.4	1.51	1.51	0.00	-24.5	-4.4
19,361.0	87.00	177.70	12,405.0	-6,710.1	-73.9	3.96	-3.94	-0.43	-23.6	-1.7
19,455.0	86.00	178.70	12,410.8	-6,803.9	-71.0	1.50	-1.06	1.06	-18.9	0.6
19,549.0	93.50	181.20	12,411.2	-6,897.8	-70.9	8.41	7.98	2.66	-19.5	0.0
19,574.0	94.50	181.60	12,409.5	-6,922.7	-71.5	4.31	4.00	1.60	-21.5	-0.8
Final MWD Survey (MD=19574.0')										

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Site:	Calm Breeze 2 Fed Com	MD Reference:	KB = 25 @ 3342.0usft (H&P 621)
Well:	#704H	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)
19,640.0	94.50	181.60	12,404.3	-6,988.5	-73.3	0.00	0.00	0.00	-27.4	-3.1
Final Projection to Bit (MD=19640.0')										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,424.1	12,290.6	207.0	-141.9	HL Crossing, MD:12424.1', TVD:12290.6', N/S:207.0', E/W:-141.9', INC:60.66
19,574.0	12,409.5	-6,922.7	-71.5	Final MWD Survey (MD=19574.0')
19,640.0	12,404.3	-6,988.5	-73.3	Final Projection to Bit (MD=19640.0')

Checked By: _____ Approved By: _____ Date: _____