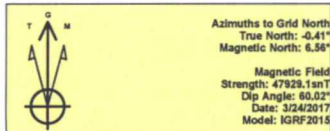




Lea County, NM (NAD 27 NME)

Hearns 34 State Com #704H

Plan #1



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.56°
Magnetic Field
Strength: 47928.1nT
Dip Angle: 60.02°
Date: 3/24/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.56°
To convert a Magnetic Direction to a True Direction, Add 6.97° East
To convert a True Direction to a Grid Direction, Subtract 6.41°

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: #704H

Ground Level: 3457.0
KB = 25 @ 3482.0usft
Northing: 425526.00 Easting: 738135.00 Latitude: 32° 10' 3.170 N Longitude: 103° 33' 49.501 W

SECTION DETAILS

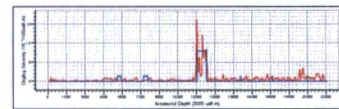
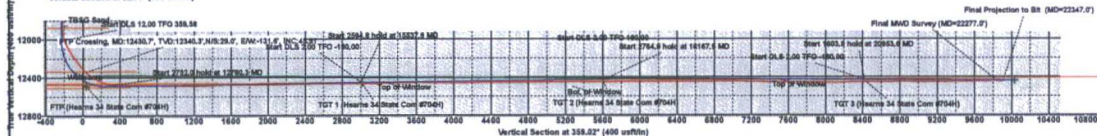
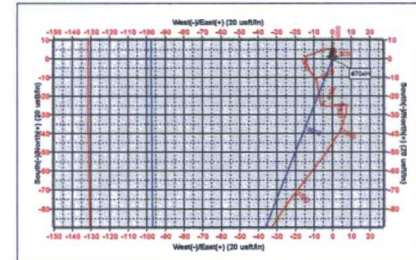
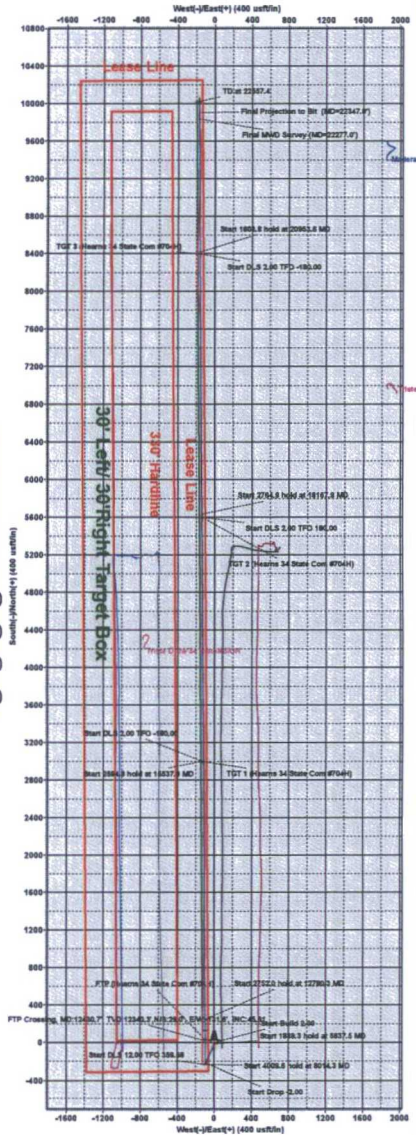
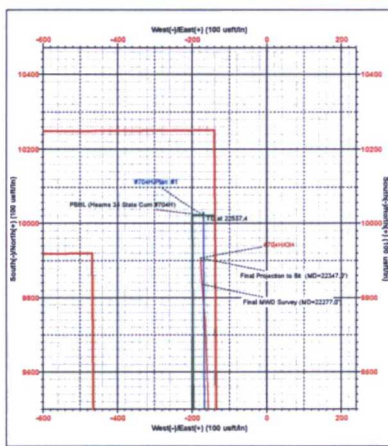
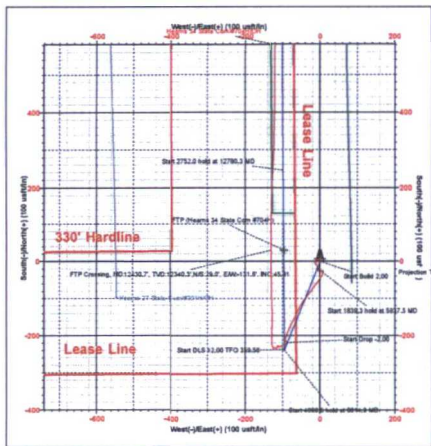
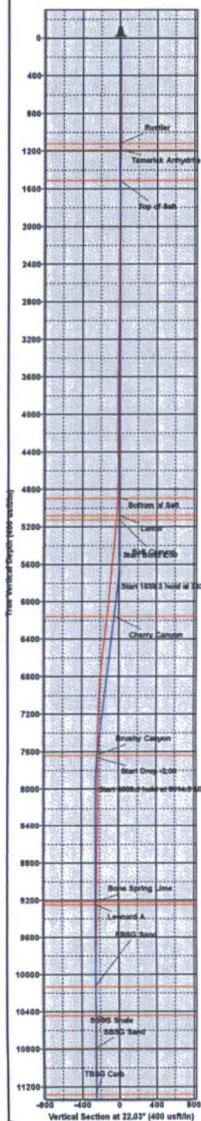
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
5500.0	0.00	0.00	5500.0	0.0	0.0	0.00	0.00	0.0	
5837.5	6.75	202.03	5836.7	-18.4	-7.4	2.00	202.03	-18.3	TGT 1 (Hearns 34 State Com #704H)
7676.8	6.75	202.03	7663.3	-218.8	-88.6	0.00	0.00	-217.3	TGT 2 (Hearns 34 State Com #704H)
8014.3	0.00	0.00	8000.0	-237.2	-96.0	2.00	180.00	-235.5	TGT 3 (Hearns 34 State Com #704H)
12023.9	0.00	0.00	12009.6	-237.2	-96.0	0.00	0.00	-235.5	PBHL (Hearns 34 State Com #704H)
12780.3	90.77	359.58	12487.0	246.7	-99.5	12.00	359.58	248.3	
15532.4	90.77	359.58	12450.0	2998.4	-119.7	0.00	0.00	3000.0	
15537.9	90.66	359.58	12449.9	3003.9	-119.7	2.00	-180.00	3005.5	
18132.6	90.66	359.58	12420.0	5598.4	-138.7	0.00	0.00	5600.0	
18167.9	89.95	359.58	12419.8	5633.7	-138.9	2.00	180.00	5635.3	
20932.8	89.95	359.58	12422.0	8398.5	-159.1	0.00	0.00	8400.0	
20953.6	89.54	359.58	12422.1	8419.3	-159.3	2.00	-180.00	8420.8	
22557.4	89.54	359.58	12435.0	10023.0	-171.0	0.00	0.00	10024.5	

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
TGT 2 (Hearns 34 State Com #704H)	12420.0	8898.4	-138.7	431124.40	737996.34
TGT 3 (Hearns 34 State Com #704H)	12422.0	8398.5	-159.1	433924.50	737976.87
PBHL (Hearns 34 State Com #704H)	12435.0	10023.0	-171.0	435549.00	737964.00
TGT 1 (Hearns 34 State Com #704H)	12450.0	2998.4	-119.7	428524.40	738016.35
FTP (Hearns 34 State Com #704H)	12487.0	35.0	-47.0	425556.00	738038.00



Lea County, NM (NAD 27 NME)
Hearns 34 State Com #704H
Plan #1
10/1/2017

EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Hearns 34 State Com

#704H

OH

Design: OH

PVA Report

20 July, 2017

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HOBBS OCD

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3482.0usft
Site:	Hearns 34 State Com	MD Reference:	KB = 25 @ 3482.0usft
Well:	#704H	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	Hearns 34 State Com		
Site Position:		Northing:	425,521.00 usft
From:	Map	Easting:	737,123.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 3.192 N
		Longitude:	103° 34' 1.274 W
		Grid Convergence:	0.41 °

Well	#704H					
Well Position	+N/S	0.0 usft	Northing:	425,526.00 usft	Latitude:	32° 10' 3.170 N
	+E/W	0.0 usft	Easting:	738,135.00 usft	Longitude:	103° 33' 49.501 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,457.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/24/2017	6.97	60.02	47,929.13758297

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	359.02

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3482.0usft
Site:	Hearns 34 State Com	MD Reference:	KB = 25 @ 3482.0usft
Well:	#704H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date 7/20/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
158.5	1,300.5	Invictus MWD (OH)	MWD	MWD - Standard	
1,503.0	22,347.0	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
158.5	0.60	58.00	158.5	0.4	0.7	0.38	0.38	0.00	-0.8	0.0
187.5	0.80	24.00	187.5	0.7	0.9	1.56	0.69	-117.24	-1.0	-0.5
246.5	0.70	17.00	246.5	1.4	1.2	0.23	-0.17	-11.86	-1.7	-0.7
275.5	0.60	26.00	275.5	1.7	1.3	0.49	-0.34	31.03	-2.1	-0.4
303.5	0.60	12.00	303.5	2.0	1.4	0.52	0.00	-50.00	-2.3	-1.0
333.5	0.40	16.00	333.5	2.3	1.5	0.68	-0.67	13.33	-2.6	-0.8
365.5	0.40	16.00	365.5	2.5	1.5	0.00	0.00	0.00	-2.8	-0.8
396.5	0.60	349.00	396.5	2.7	1.5	0.98	0.65	-87.10	-2.4	-2.0
460.5	0.50	10.00	460.5	3.3	1.5	0.35	-0.16	32.81	-3.6	-0.9
491.5	0.60	359.00	491.5	3.6	1.5	0.47	0.32	-35.48	-3.6	-1.6
522.5	0.60	16.00	522.5	4.0	1.6	0.57	0.00	54.84	-4.2	-0.4
552.5	0.60	16.00	552.5	4.3	1.7	0.00	0.00	0.00	-4.6	-0.4
584.5	0.40	24.00	584.5	4.5	1.7	0.66	-0.62	25.00	-4.8	0.2
677.5	0.30	334.00	677.5	5.0	1.8	0.33	-0.11	-53.76	-3.8	-3.8
708.5	0.40	343.00	708.5	5.2	1.7	0.37	0.32	29.03	-4.5	-3.2
739.5	0.30	354.00	739.5	5.4	1.7	0.39	-0.32	35.48	-5.2	-2.2
802.5	0.40	315.00	802.5	5.7	1.5	0.40	0.16	-61.90	-3.0	-5.1
865.5	0.20	297.00	865.5	5.9	1.2	0.35	-0.32	-28.57	-1.6	-5.8
927.5	0.40	279.00	927.5	6.0	0.9	0.35	0.32	-29.03	0.0	-6.1
959.5	0.50	283.00	959.5	6.1	0.7	0.33	0.31	12.50	-0.7	-6.1

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn 34 State Com
Well: #704H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3482.0usft
MD Reference: KB = 25 @ 3482.0usft
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)
1,083.5	0.70	257.00	1,083.5	6.0	-0.6	0.27	0.16	-20.97	0.8	-6.0
1,146.5	0.60	258.00	1,146.5	5.9	-1.3	0.16	-0.16	1.59	0.0	-6.0
1,177.5	0.70	258.00	1,177.5	5.8	-1.6	0.32	0.32	0.00	-0.4	-6.0
1,207.5	0.90	261.00	1,207.5	5.7	-2.0	0.68	0.67	10.00	-1.1	-6.0
1,238.5	0.90	250.00	1,238.4	5.6	-2.5	0.56	0.00	-35.48	-0.4	-6.1
1,269.5	0.90	263.00	1,269.4	5.5	-3.0	0.66	0.00	41.94	-2.3	-5.8
1,300.5	0.90	261.00	1,300.4	5.4	-3.5	0.10	0.00	-6.45	-2.6	-5.9
1,503.0	1.10	247.70	1,502.9	4.4	-6.8	0.15	0.10	-6.57	-4.6	-6.7
1,628.0	1.10	249.90	1,627.9	3.5	-9.1	0.03	0.00	1.76	-7.3	-6.4
1,815.0	0.90	249.80	1,814.9	2.4	-12.1	0.11	-0.11	-0.05	-10.5	-6.5
2,003.0	0.60	251.10	2,002.8	1.6	-14.4	0.16	-0.16	0.69	-13.1	-6.2
2,191.0	1.10	167.50	2,190.8	-0.5	-15.0	0.63	0.27	-44.47	2.8	-14.7
2,379.0	1.10	152.20	2,378.8	-3.8	-13.8	0.16	0.00	-8.14	3.0	-14.0
2,567.0	0.90	146.50	2,566.8	-6.7	-12.1	0.12	-0.11	-3.03	1.1	-13.8
2,757.0	0.70	138.80	2,756.7	-8.8	-10.5	0.12	-0.11	-4.05	0.3	-13.7
2,948.0	0.60	127.90	2,947.7	-10.3	-9.0	0.08	-0.05	-5.71	0.7	-13.6
3,139.0	1.10	179.40	3,138.7	-12.7	-8.1	0.45	0.26	26.96	-12.6	-8.3
3,326.0	1.30	170.10	3,325.7	-16.6	-7.8	0.15	0.11	-4.97	-15.0	-10.5
3,513.0	1.00	161.80	3,512.6	-20.3	-6.9	0.18	-0.16	-4.44	-17.1	-12.9
3,701.0	0.50	217.90	3,700.6	-22.5	-6.9	0.44	-0.27	29.84	-21.9	8.4
3,889.0	0.70	124.70	3,888.6	-23.8	-6.4	0.47	0.11	-49.57	-8.2	-23.2
4,076.0	0.90	108.70	4,075.6	-24.9	-4.1	0.16	0.11	-8.56	-4.1	-24.9
4,263.0	0.80	78.70	4,262.6	-25.1	-1.4	0.24	-0.05	-16.04	6.3	-24.3
4,449.0	2.40	78.40	4,448.5	-24.1	3.7	0.86	0.86	-0.16	1.3	-24.3
4,637.0	0.60	187.10	4,636.4	-24.2	7.4	1.41	-0.96	57.82	-23.1	10.3
4,825.0	2.20	180.80	4,824.4	-28.8	7.2	0.85	0.85	-3.35	-28.7	7.6
5,012.0	3.90	209.00	5,011.1	-38.0	4.1	1.19	0.91	15.08	-31.2	22.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3482.0usft
Site:	Hearns 34 State Com	MD Reference:	KB = 25 @ 3482.0usft
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)
5,200.0	3.70	215.20	5,198.7	-48.5	-2.5	0.24	-0.11	3.30	-41.1	26.0
5,387.0	6.00	219.70	5,385.0	-61.0	-12.2	1.25	1.23	2.41	-54.7	29.7
5,575.0	5.40	215.70	5,572.1	-75.7	-23.7	0.38	-0.32	-2.13	-74.4	24.8
5,763.0	5.20	213.20	5,759.3	-90.0	-33.5	0.16	-0.11	-1.33	-81.8	18.9
5,950.0	5.40	220.50	5,945.5	-103.8	-43.9	0.38	0.11	3.90	-75.9	23.4
6,137.0	7.00	205.50	6,131.4	-120.8	-54.5	1.21	0.86	-8.02	-77.3	-0.5
6,324.0	6.90	206.90	6,317.0	-141.1	-64.5	0.11	-0.05	0.75	-78.0	-0.2
6,512.0	6.10	207.10	6,503.8	-160.1	-74.1	0.43	-0.43	0.11	-77.3	-1.9
6,699.0	5.30	203.80	6,689.9	-176.8	-82.1	0.46	-0.43	-1.76	-73.6	-7.6
6,887.0	4.30	201.90	6,877.2	-191.3	-88.3	0.54	-0.53	-1.01	-66.9	-10.2
7,074.0	1.50	191.20	7,064.0	-200.2	-91.4	1.52	-1.50	-5.72	-51.6	-19.6
7,261.0	1.50	200.30	7,250.9	-204.9	-92.7	0.13	0.00	4.87	-36.9	-10.2
7,448.0	1.40	200.90	7,437.9	-209.3	-94.3	0.05	-0.05	0.32	-19.7	-9.3
7,635.0	0.70	186.20	7,624.8	-212.6	-95.3	0.40	-0.37	-7.86	1.1	-8.6
7,822.0	0.70	94.00	7,811.8	-213.8	-94.3	0.54	0.00	-49.30	1.9	17.5
8,010.0	1.10	55.30	7,999.8	-212.9	-91.6	0.38	0.21	-20.59	-17.4	17.5
8,196.0	1.40	202.50	8,185.8	-214.0	-91.0	1.29	0.16	79.14	23.4	-4.3
8,383.0	0.70	195.00	8,372.7	-217.2	-92.2	0.38	-0.37	-4.01	20.3	-1.5
8,570.0	0.70	174.30	8,559.7	-219.4	-92.4	0.13	0.00	-11.07	17.3	5.4
8,758.0	0.80	167.90	8,747.7	-221.8	-92.0	0.07	0.05	-3.40	14.2	7.1
8,946.0	0.10	32.50	8,935.7	-223.0	-91.6	0.46	-0.37	-72.02	-14.3	4.0
9,127.0	1.20	264.90	9,116.7	-223.0	-93.4	0.70	0.61	-70.50	3.8	-13.9
9,315.0	1.20	260.10	9,304.7	-223.5	-97.3	0.05	0.00	-2.55	1.0	-13.7
9,503.0	0.60	269.70	9,492.6	-223.9	-100.3	0.33	-0.32	5.11	-4.2	-13.4
9,690.0	1.40	223.40	9,679.6	-225.5	-102.8	0.58	0.43	-24.76	3.8	-13.0
9,878.0	2.40	252.30	9,867.5	-228.4	-108.1	0.72	0.53	15.37	-8.9	-12.1
10,064.0	1.00	286.00	10,053.4	-229.1	-113.4	0.89	-0.75	18.12	-19.0	-3.0

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hearn's 34 State Com
 Well: #704H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #704H
 TVD Reference: KB = 25 @ 3482.0usft
 MD Reference: KB = 25 @ 3482.0usft
 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)
10,251.0	0.70	10.70	10,240.4	-227.6	-114.8	0.62	-0.16	45.29	-6.0	20.2
10,344.0	0.70	346.40	10,333.4	-226.5	-114.8	0.32	0.00	-26.13	-14.9	15.7
10,531.0	0.70	120.40	10,520.4	-225.9	-114.1	0.69	0.00	71.66	21.3	0.6
10,718.0	0.50	72.60	10,707.4	-226.3	-112.3	0.28	-0.11	-25.56	12.3	15.3
10,903.0	0.40	248.00	10,892.4	-226.3	-112.1	0.49	-0.05	94.81	-10.9	-16.2
11,092.0	0.70	263.20	11,081.4	-226.6	-113.9	0.18	0.16	8.04	-16.5	-12.6
11,280.0	0.70	166.60	11,269.4	-227.9	-114.8	0.56	0.00	-51.38	13.4	-16.1
11,467.0	1.30	231.30	11,456.3	-230.3	-116.2	0.63	0.32	34.60	-11.4	-18.0
11,655.0	1.40	259.30	11,644.3	-232.1	-120.1	0.35	0.05	14.89	-22.7	-9.5
11,692.0	1.90	271.90	11,681.3	-232.2	-121.2	1.66	1.35	34.05	-25.3	-4.2
11,763.0	2.30	286.30	11,752.2	-231.7	-123.7	0.93	0.56	20.28	-28.1	2.5
11,857.0	1.80	299.40	11,846.2	-230.5	-126.8	0.73	-0.53	13.94	-30.1	9.2
11,951.0	7.00	343.90	11,939.9	-224.2	-129.7	6.23	5.53	47.34	-21.7	28.8
11,998.0	18.10	356.90	11,985.7	-214.2	-130.9	24.22	23.62	27.66	-24.1	34.2
12,044.0	26.90	2.80	12,028.1	-196.6	-130.7	19.73	19.13	12.83	-36.7	38.4
12,091.0	28.70	2.10	12,069.7	-174.7	-129.8	3.89	3.83	-1.49	-55.9	37.5
12,138.0	30.10	359.90	12,110.7	-151.6	-129.4	3.76	2.98	-4.68	-72.3	34.2
12,184.0	34.20	357.80	12,149.6	-127.2	-129.9	9.24	8.91	-4.57	-85.1	31.4
12,231.0	38.50	359.10	12,187.5	-99.3	-130.7	9.29	9.15	2.77	-94.4	33.5
12,278.0	39.60	359.00	12,224.0	-69.7	-131.2	2.34	2.34	-0.21	-101.0	33.2
12,325.0	38.60	359.10	12,260.4	-40.1	-131.6	2.13	-2.13	0.21	-101.7	33.6
12,372.0	39.50	0.30	12,296.9	-10.5	-131.8	2.50	1.91	2.55	-95.8	35.4
12,419.0	43.80	0.30	12,332.0	20.8	-131.6	9.15	9.15	0.00	-87.0	35.1
12,430.7	45.91	0.10	12,340.3	29.0	-131.6	18.08	18.04	-1.68	-84.7	34.7
FTP Crossing, MD:12430.7', TVD:12340.3', N/S:29.0', E/W:-131.6', INC:45.91										
12,465.0	52.10	359.60	12,362.8	54.9	-131.7	18.08	18.04	-1.47	-78.5	34.0
12,512.0	57.40	359.90	12,389.9	93.3	-131.8	11.29	11.28	0.64	-69.5	34.1

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn's 34 State Com
Well: #704H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3482.0usft
MD Reference: KB = 25 @ 3482.0usft
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)
12,559.0	61.80	0.40	12,413.7	133.8	-131.7	9.41	9.36	1.06	-59.1	34.0
12,606.0	67.10	2.00	12,434.0	176.2	-130.8	11.69	11.28	3.40	-47.5	33.0
12,652.0	72.30	3.50	12,449.9	219.2	-128.8	11.71	11.30	3.26	-35.9	30.4
12,701.0	78.30	2.50	12,462.4	266.5	-126.3	12.40	12.24	-2.04	-23.9	27.0
12,745.0	81.90	2.20	12,469.9	309.8	-124.5	8.21	8.18	-0.68	-16.0	24.7
12,789.0	87.30	1.00	12,474.1	353.6	-123.3	12.57	12.27	-2.73	-11.5	23.0
12,820.0	89.80	0.60	12,474.8	384.6	-122.9	8.17	8.06	-1.29	-10.3	22.3
12,913.0	90.00	0.20	12,475.0	477.6	-122.2	0.48	0.22	-0.43	-8.9	21.0
13,008.0	89.50	0.60	12,475.4	572.6	-121.5	0.67	-0.53	0.42	-7.2	19.6
13,101.0	88.20	0.60	12,477.3	665.6	-120.6	1.40	-1.40	0.00	-4.1	18.0
13,195.0	88.00	0.90	12,480.4	759.5	-119.3	0.38	-0.21	0.32	0.3	16.1
13,290.0	88.80	1.20	12,483.1	854.5	-117.6	0.90	0.84	0.32	4.2	13.6
13,383.0	89.50	1.30	12,484.4	947.4	-115.6	0.76	0.75	0.11	6.8	10.9
13,477.0	90.80	0.00	12,484.2	1,041.4	-114.5	1.96	1.38	-1.38	7.9	9.2
13,571.0	90.30	0.20	12,483.3	1,135.4	-114.3	0.57	-0.53	0.21	8.2	8.3
13,665.0	91.00	0.30	12,482.2	1,229.4	-113.9	0.75	0.74	0.11	8.4	7.2
13,759.0	91.40	0.80	12,480.3	1,323.4	-113.0	0.68	0.43	0.53	7.7	5.6
13,852.0	91.90	0.60	12,477.6	1,416.3	-111.9	0.58	0.54	-0.22	6.3	3.8
13,946.0	91.60	0.60	12,474.7	1,510.3	-110.9	0.32	-0.32	0.00	4.7	2.1
14,040.0	91.80	1.10	12,471.9	1,604.2	-109.5	0.57	0.21	0.53	3.2	0.1
14,134.0	89.30	1.10	12,471.0	1,698.2	-107.7	2.66	-2.66	0.00	3.5	-2.4
14,228.0	89.00	0.70	12,472.4	1,792.2	-106.2	0.53	-0.32	-0.43	6.2	-4.6
14,322.0	89.50	0.30	12,473.6	1,886.2	-105.4	0.68	0.53	-0.43	8.7	-6.1
14,416.0	90.70	359.60	12,473.5	1,980.2	-105.5	1.48	1.28	-0.74	9.8	-6.7
14,510.0	90.80	359.60	12,472.2	2,074.2	-106.1	0.11	0.11	0.00	9.8	-6.7
14,604.0	91.30	359.90	12,470.5	2,168.1	-106.6	0.62	0.53	0.32	9.4	-7.0
14,698.0	91.60	0.30	12,468.1	2,262.1	-106.4	0.53	0.32	0.43	8.2	-7.9

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hearn's 34 State Com
 Well: #704H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #704H
 TVD Reference: KB = 25 @ 3482.0usft
 MD Reference: KB = 25 @ 3482.0usft
 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)
14,791.0	90.70	359.40	12,466.3	2,355.1	-106.6	1.37	-0.97	-0.97	7.6	-8.3
14,885.0	91.20	359.80	12,464.7	2,449.1	-107.3	0.68	0.53	0.43	7.3	-8.3
14,978.0	90.90	358.60	12,463.0	2,542.0	-108.6	1.33	-0.32	-1.29	6.9	-7.7
15,072.0	89.70	359.10	12,462.5	2,636.0	-110.5	1.38	-1.28	0.53	7.6	-6.5
15,166.0	89.80	359.00	12,462.9	2,730.0	-112.0	0.15	0.11	-0.11	9.3	-5.7
15,260.0	89.50	358.90	12,463.5	2,824.0	-113.8	0.34	-0.32	-0.11	11.2	-4.6
15,353.0	90.20	359.00	12,463.8	2,917.0	-115.5	0.76	0.75	0.11	12.7	-3.6
15,447.0	90.60	359.30	12,463.1	3,011.0	-116.9	0.53	0.43	0.32	13.2	-2.9
15,541.0	90.40	359.70	12,462.3	3,105.0	-117.7	0.48	-0.21	0.43	13.5	-2.7
15,635.0	91.10	0.20	12,461.0	3,198.9	-117.8	0.92	0.74	0.53	13.4	-3.4
15,729.0	91.40	0.60	12,459.0	3,292.9	-117.1	0.53	0.32	0.43	12.4	-4.7
15,823.0	91.90	359.70	12,456.3	3,386.9	-116.9	1.09	0.53	-0.96	10.8	-5.6
15,916.0	91.30	359.10	12,453.7	3,479.8	-117.8	0.91	-0.65	-0.65	9.2	-5.3
16,010.0	89.40	358.20	12,453.1	3,573.8	-120.0	2.24	-2.02	-0.96	9.8	-3.8
16,104.0	89.50	358.00	12,454.0	3,667.7	-123.2	0.24	0.11	-0.21	11.7	-1.4
16,198.0	89.80	358.40	12,454.6	3,761.7	-126.1	0.53	0.32	0.43	13.4	0.9
16,292.0	89.80	359.10	12,454.9	3,855.7	-128.2	0.74	0.00	0.74	14.8	2.2
16,386.0	89.50	359.50	12,455.5	3,949.7	-129.3	0.53	-0.32	0.43	16.5	2.7
16,479.0	90.10	359.10	12,455.8	4,042.7	-130.5	0.78	0.65	-0.43	17.9	3.2
16,573.0	91.20	359.00	12,454.8	4,136.6	-132.0	1.18	1.17	-0.11	17.9	4.0
16,667.0	90.60	359.20	12,453.3	4,230.6	-133.5	0.67	-0.64	0.21	17.5	4.8
16,761.0	89.20	0.20	12,453.4	4,324.6	-134.0	1.83	-1.49	1.06	18.7	4.6
16,855.0	90.60	0.10	12,453.6	4,418.6	-133.7	1.49	1.49	-0.11	20.0	3.7
16,949.0	89.80	359.30	12,453.3	4,512.6	-134.2	1.20	-0.85	-0.85	20.8	3.5
17,043.0	90.50	359.10	12,453.0	4,606.6	-135.5	0.77	0.74	-0.21	21.6	4.1
17,137.0	90.20	359.10	12,452.5	4,700.6	-137.0	0.32	-0.32	0.00	22.1	4.9
17,231.0	91.30	359.70	12,451.2	4,794.6	-138.0	1.33	1.17	0.64	22.0	5.2

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3482.0usft
Site:	Hearns 34 State Com	MD Reference:	KB = 25 @ 3482.0usft
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)
17,325.0	90.50	359.30	12,449.8	4,888.5	-138.8	0.95	-0.85	-0.43	21.6	5.3
17,419.0	90.20	359.60	12,449.2	4,982.5	-139.7	0.45	-0.32	0.32	22.1	5.6
17,513.0	90.60	359.90	12,448.5	5,076.5	-140.1	0.53	0.43	0.32	22.5	5.3
17,607.0	91.70	359.70	12,446.6	5,170.5	-140.5	1.19	1.17	-0.21	21.7	4.9
17,700.0	89.10	359.60	12,446.0	5,263.5	-141.0	2.80	-2.80	-0.11	22.1	4.8
17,794.0	89.10	359.80	12,447.5	5,357.5	-141.5	0.21	0.00	0.21	24.7	4.6
17,888.0	88.60	359.50	12,449.3	5,451.5	-142.1	0.62	-0.53	-0.32	27.7	4.5
17,982.0	90.60	359.50	12,450.0	5,545.5	-142.9	2.13	2.13	0.00	29.4	4.6
18,076.0	91.40	359.70	12,448.4	5,639.4	-143.6	0.88	0.85	0.21	28.5	4.6
18,169.0	91.20	359.20	12,446.3	5,732.4	-144.5	0.58	-0.22	-0.54	26.4	4.8
18,263.0	90.90	359.20	12,444.5	5,826.4	-145.8	0.32	-0.32	0.00	24.6	5.5
18,356.0	89.60	358.50	12,444.1	5,919.4	-147.6	1.59	-1.40	-0.75	24.1	6.6
18,450.0	88.80	358.80	12,445.4	6,013.3	-149.9	0.91	-0.85	0.32	25.3	8.2
18,544.0	90.20	359.20	12,446.3	6,107.3	-151.5	1.55	1.49	0.43	26.1	9.1
18,589.0	90.30	359.20	12,446.1	6,152.3	-152.1	0.22	0.22	0.00	25.8	9.4
18,637.0	90.40	359.40	12,445.8	6,200.3	-152.7	0.47	0.21	0.42	25.5	9.7
18,730.0	90.50	0.20	12,445.0	6,293.3	-153.0	0.87	0.11	0.86	24.7	9.3
18,823.0	90.20	0.50	12,444.5	6,386.3	-152.5	0.46	-0.32	0.32	24.1	8.0
18,917.0	89.40	0.40	12,444.8	6,480.3	-151.7	0.86	-0.85	-0.11	24.3	6.6
19,011.0	90.70	0.70	12,444.7	6,574.3	-150.8	1.42	1.38	0.32	24.2	5.0
19,105.0	90.40	0.00	12,443.8	6,668.3	-150.3	0.81	-0.32	-0.74	23.2	3.8
19,198.0	90.70	0.10	12,442.9	6,761.3	-150.2	0.34	0.32	0.11	22.2	3.0
19,292.0	91.00	0.40	12,441.5	6,855.3	-149.8	0.45	0.32	0.32	20.7	1.9
19,385.0	89.60	359.50	12,441.0	6,948.3	-149.8	1.79	-1.51	-0.97	20.2	1.3
19,479.0	89.90	359.50	12,441.5	7,042.2	-150.7	0.32	0.32	0.00	20.5	1.5
19,573.0	88.90	359.90	12,442.4	7,136.2	-151.2	1.15	-1.06	0.43	21.4	1.3
19,667.0	88.30	359.90	12,444.7	7,230.2	-151.3	0.64	-0.64	0.00	23.7	0.7

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn's 34 State Com
Well: #704H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3482.0usft
MD Reference: KB = 25 @ 3482.0usft
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)
19,760.0	88.40	0.00	12,447.4	7,323.2	-151.4	0.15	0.11	0.11	26.3	0.1
19,854.0	88.40	359.40	12,450.0	7,417.1	-151.9	0.64	0.00	-0.64	28.8	-0.1
19,948.0	89.80	358.70	12,451.5	7,511.1	-153.5	1.67	1.49	-0.74	30.2	0.8
20,042.0	89.80	358.30	12,451.8	7,605.1	-155.9	0.43	0.00	-0.43	30.5	2.6
20,136.0	89.40	358.10	12,452.5	7,699.0	-158.9	0.48	-0.43	-0.21	31.0	4.9
20,230.0	89.30	357.50	12,453.6	7,793.0	-162.5	0.65	-0.11	-0.64	32.0	7.8
20,324.0	90.20	353.30	12,454.0	7,886.6	-170.0	4.57	0.96	-4.47	32.4	14.6
20,418.0	89.50	353.60	12,454.2	7,980.0	-180.7	0.81	-0.74	0.32	32.6	24.6
20,511.0	90.10	356.70	12,454.5	8,072.7	-188.6	3.40	0.65	3.33	32.8	31.8
20,605.0	92.00	1.20	12,452.8	8,166.6	-190.3	5.20	2.02	4.79	31.0	32.9
20,699.0	90.90	0.70	12,450.4	8,260.6	-188.8	1.29	-1.17	-0.53	28.5	30.6
20,793.0	90.50	359.90	12,449.3	8,354.6	-188.3	0.95	-0.43	-0.85	27.3	29.5
20,887.0	88.90	0.90	12,449.8	8,448.5	-187.6	2.01	-1.70	1.06	27.5	28.1
20,981.0	90.20	2.00	12,450.5	8,542.5	-185.2	1.81	1.38	1.17	27.4	25.0
21,074.0	91.90	2.00	12,448.8	8,635.4	-182.0	1.83	1.83	0.00	25.0	21.1
21,168.0	91.30	1.50	12,446.2	8,729.4	-179.1	0.83	-0.64	-0.53	21.6	17.6
21,262.0	90.00	2.10	12,445.1	8,823.3	-176.2	1.52	-1.38	0.64	19.8	13.9
21,355.0	90.20	2.90	12,445.0	8,916.2	-172.1	0.89	0.22	0.86	18.9	9.2
21,449.0	89.00	2.40	12,445.6	9,010.1	-167.8	1.38	-1.28	-0.53	18.8	4.2
21,543.0	89.40	2.20	12,446.9	9,104.0	-164.0	0.48	0.43	-0.21	19.3	-0.3
21,637.0	88.70	3.80	12,448.5	9,197.9	-159.1	1.86	-0.74	1.70	20.1	-5.9
21,731.0	90.70	1.60	12,449.0	9,291.8	-154.6	3.16	2.13	-2.34	19.9	-11.0
21,825.0	90.00	359.10	12,448.4	9,385.7	-154.1	2.76	-0.74	-2.66	18.5	-12.3
21,919.0	91.90	358.20	12,446.9	9,479.7	-156.3	2.24	2.02	-0.96	16.2	-10.8
22,013.0	91.60	358.00	12,444.0	9,573.6	-159.4	0.38	-0.32	-0.21	12.6	-8.3
22,106.0	91.60	357.90	12,441.4	9,666.5	-162.7	0.11	0.00	-0.11	9.3	-5.7
22,200.0	90.50	355.50	12,439.7	9,760.3	-168.1	2.81	-1.17	-2.55	6.8	-0.9

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3482.0usft
Site:	Hearns 34 State Com	MD Reference:	KB = 25 @ 3482.0usft
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)	
22,277.0	89.20	356.00	12,439.9	9,837.1	-173.8	1.81	-1.69	0.65	6.4	4.2	
Final MWD Survey (MD=22277.0')											
22,347.0	89.20	356.00	12,440.8	9,906.9	-178.7	0.00	0.00	0.00	6.8	8.6	
Final Projection to Bit (MD=22347.0')											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,430.7	12,340.3	29.0	-131.6	FTP Crossing, MD:12430.7', TVD:12340.3', N/S:29.0', E/W:-131.6', INC:45.91
22,277.0	12,439.9	9,837.1	-173.8	Final MWD Survey (MD=22277.0')
22,347.0	12,440.8	9,906.9	-178.7	Final Projection to Bit (MD=22347.0')

Checked By: _____	Approved By: _____	Date: _____
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