

HOBBS OCD
SEP 21 2017
RECEIVED



Lea County, NM (NAD 27 NME)

Hearns 34 State Com #706H

H&P 653

Plan #1



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.56°

Magnetic Field
Strength: 47928.8 nT
Dip Angle: 60.01°
Date: 3/24/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.57°
To convert a Magnetic Direction to a True Direction, Add 6.97° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

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: #706H

Ground Level: 3461.0
KB = 25 @ 3486.0usft (H&P 653)
Northing: 425521.00 Easting: 737088.00 Latitude: 32° 10' 3.194 N Longitude: 103° 34' 1.681 W

SECTION DETAILS

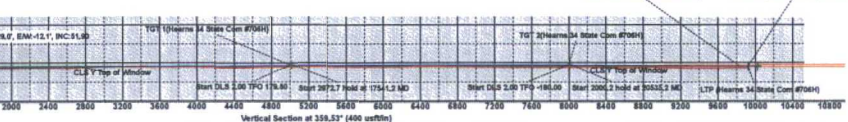
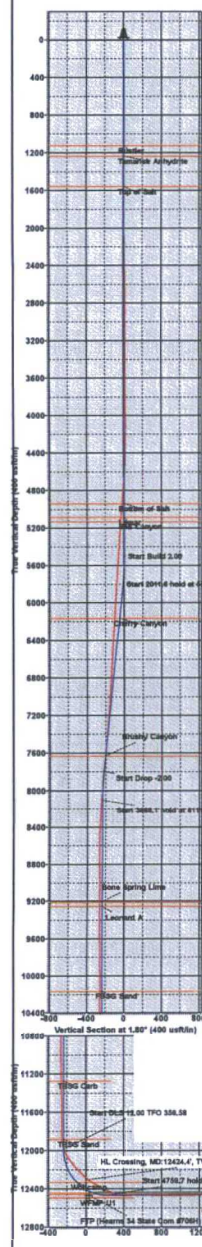
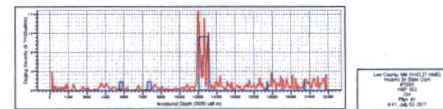
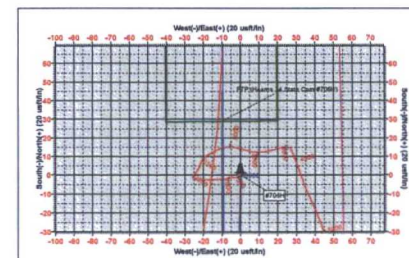
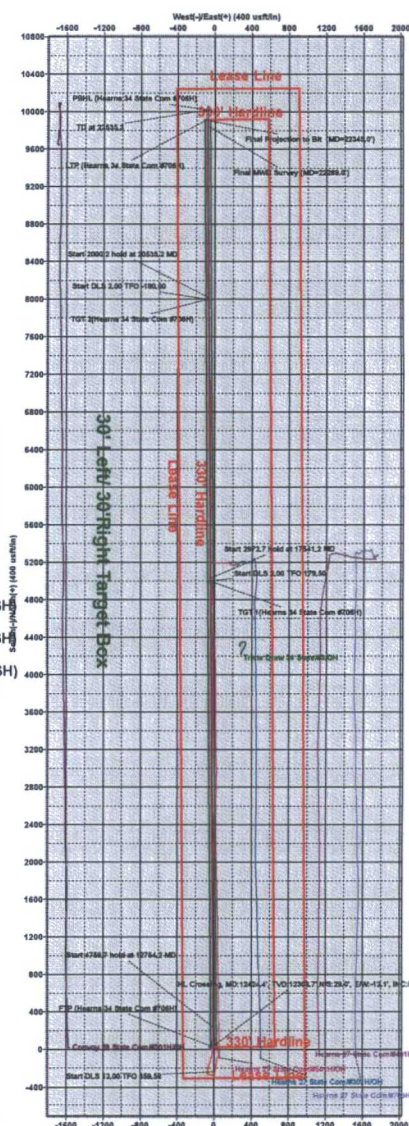
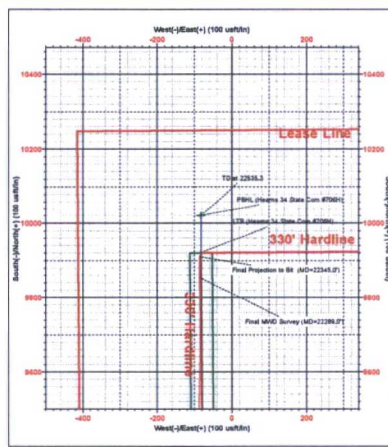
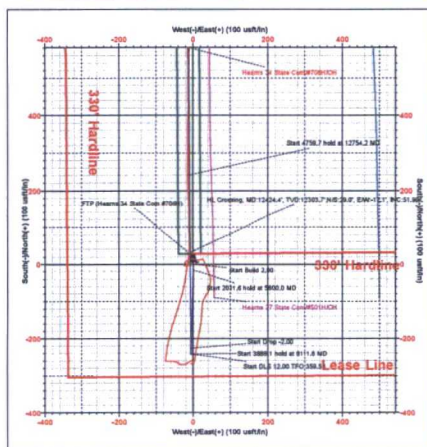
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
5500.0	0.00	0.00	5500.0	0.0	0.0	0.00	0.00	0.0	
5800.0	6.00	181.80	5799.5	-15.7	-0.5	2.00	181.80	-15.7	
7811.6	6.00	181.80	7800.0	-225.8	-7.1	0.00	0.00	-225.8	
8111.6	0.00	0.00	8099.5	-241.5	-7.6	2.00	180.00	-241.5	
11999.7	0.00	0.00	11987.6	-241.5	-7.6	0.00	0.00	-241.5	
12754.2	90.54	359.58	12465.0	240.4	-11.2	12.00	359.58	240.5	
17513.9	90.54	359.58	12420.0	4999.8	-46.3	0.00	0.00	5000.0	TGT 1(Hearns 34 State Com #706H)
17541.2	90.00	359.58	12419.9	5027.0	-46.5	2.00	179.50	5027.2	
20513.9	90.00	359.58	12420.0	7999.7	-68.2	0.00	0.00	8000.0	TGT 2(Hearns 34 State Com #706H)
20535.2	89.57	359.58	12420.1	8020.9	-68.4	2.00	-180.00	8021.2	
22535.3	89.57	359.58	12435.0	10021.0	-83.0	0.00	0.00	10021.3	PBHL (Hearns 34 State Com #706H)

CASING DETAILS

No casing data is available

WELLSBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
TGT 1(Hearns 34 State Com #706H)	12420.0	4999.8	-46.3	430520.80	737041.69
TGT 2(Hearns 34 State Com #706H)	12420.0	7999.7	-68.2	433520.70	737015.77
LTP (Hearns 34 State Com #706H)	12435.0	9921.0	-83.0	435442.00	737005.00
PBHL (Hearns 34 State Com #706H)	12435.0	10021.0	-83.0	435442.00	737005.00
FTP (Hearns 34 State Com #706H)	12465.0	29.0	-10.0	425550.00	737078.00



EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Hearns 34 State Com

#706H

OH

Design: OH

PVA Report

05 July, 2017

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PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3486.0usft (H&P 653)
Site:	Hearns 34 State Com	MD Reference:	KB = 25 @ 3486.0usft (H&P 653)
Well:	#706H	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	Latitude:	32° 10' 3.192 N
From:	Map	Easting:	737,123.00 usft	Longitude:	103° 34' 1.274 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 °

Well	#706H					
Well Position	+N/-S	0.0 usft	Northing:	425,521.00 usft	Latitude:	32° 10' 3.194 N
	+E/-W	0.0 usft	Easting:	737,088.00 usft	Longitude:	103° 34' 1.681 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,461.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/24/2017	6.97	60.01	47,928.75422233

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	359.53	

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn's 34 State Com
Well: #706H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25 @ 3486.0usft (H&P 653)
MD Reference: KB = 25 @ 3486.0usft (H&P 653)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Survey Program		Date 7/5/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
126.5	1,336.5	Invictus MWD (OH)	MWD	MWD - Standard	
1,520.0	22,345.0	Drill Tech 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
126.5	0.30	257.89	126.5	-0.1	-0.3	0.24	0.24	0.00	-0.3	0.0
131.5	0.10	274.89	131.5	-0.1	-0.3	4.13	-4.00	340.00	-0.3	0.1
246.5	0.20	299.89	246.5	0.0	-0.6	0.10	0.09	21.74	-0.6	0.3
275.5	0.20	281.89	275.5	0.1	-0.7	0.22	0.00	-62.07	-0.7	0.1
303.5	0.40	238.89	303.5	0.0	-0.8	1.03	0.71	-153.57	-0.7	-0.5
333.5	0.20	216.89	333.5	-0.1	-1.0	0.76	-0.67	-73.33	-0.6	-0.7
395.5	0.50	213.89	395.5	-0.4	-1.2	0.48	0.48	-4.84	-1.0	-0.8
426.5	0.40	254.89	426.5	-0.5	-1.4	1.06	-0.32	132.26	-1.4	0.1
520.5	0.40	219.89	520.5	-0.9	-1.9	0.26	0.00	-37.23	-1.9	-0.9
581.5	0.50	260.89	581.5	-1.1	-2.3	0.54	0.16	67.21	-2.4	0.7
642.5	0.50	265.89	642.5	-1.1	-2.8	0.07	0.00	8.20	-2.9	0.9
674.5	0.50	290.89	674.5	-1.1	-3.1	0.68	0.00	78.12	-2.5	2.1
705.5	0.60	260.89	705.5	-1.1	-3.4	0.97	0.32	-96.77	-3.5	0.5
736.5	0.40	259.89	736.5	-1.1	-3.6	0.65	-0.65	-3.23	-3.8	0.4
768.5	0.50	281.89	768.5	-1.1	-3.9	0.62	0.31	68.75	-3.6	1.9
801.5	0.40	267.89	801.5	-1.1	-4.1	0.45	-0.30	-42.42	-4.2	0.9
832.5	0.40	287.89	832.5	-1.0	-4.3	0.45	0.00	64.52	-3.8	2.3
863.5	0.40	285.89	863.5	-1.0	-4.6	0.05	0.00	-6.45	-4.1	2.2
891.5	0.60	275.89	891.5	-0.9	-4.8	0.78	0.71	-35.71	-4.7	1.4
924.5	0.60	275.89	924.5	-0.9	-5.1	0.00	0.00	0.00	-5.0	1.4

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3486.0usft (H&P 653)
Site:	Hearns 34 State Com	MD Reference:	KB = 25 @ 3486.0usft (H&P 653)
Well:	#706H	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)
955.5	0.60	248.89	955.5	-0.9	-5.5	0.90	0.00	-87.10	-5.4	-1.1
986.5	0.70	249.89	986.5	-1.1	-5.8	0.32	0.32	3.23	-5.8	-1.0
1,016.5	0.70	271.89	1,016.5	-1.1	-6.1	0.89	0.00	73.33	-6.1	1.3
1,048.5	0.80	254.89	1,048.5	-1.2	-6.5	0.76	0.31	-53.12	-6.6	-0.6
1,080.5	0.80	245.89	1,080.5	-1.3	-7.0	0.39	0.00	-28.12	-6.9	-1.6
1,104.5	0.60	238.89	1,104.5	-1.5	-7.2	0.90	-0.83	-29.17	-6.9	-2.5
1,135.5	0.70	250.89	1,135.5	-1.6	-7.5	0.54	0.32	38.71	-7.7	-1.0
1,166.5	0.80	246.89	1,166.5	-1.7	-7.9	0.36	0.32	-12.90	-8.0	-1.5
1,198.5	0.80	255.89	1,198.5	-1.9	-8.3	0.39	0.00	28.12	-8.6	-0.2
1,228.5	1.20	254.89	1,228.5	-2.0	-8.9	1.33	1.33	-3.33	-9.1	-0.4
1,260.5	1.20	268.89	1,260.4	-2.1	-9.5	0.91	0.00	43.75	-9.5	1.9
1,323.5	1.50	273.89	1,323.4	-2.1	-11.0	0.51	0.48	7.94	-10.8	2.8
1,336.5	1.70	273.89	1,336.4	-2.0	-11.4	1.54	1.54	0.00	-11.2	2.8
1,520.0	1.93	266.28	1,519.8	-2.1	-17.2	0.18	0.13	-4.15	-17.3	0.9
1,709.0	2.02	269.79	1,708.7	-2.3	-23.7	0.08	0.05	1.86	-23.7	2.2
1,897.0	0.97	37.85	1,896.7	-1.0	-26.0	1.45	-0.56	68.12	16.8	19.9
2,084.0	1.14	32.93	2,083.7	1.8	-24.0	0.10	0.09	-2.63	11.6	21.1
2,270.0	1.06	25.90	2,269.6	4.9	-22.3	0.08	-0.04	-3.78	5.3	22.2
2,457.0	1.23	15.96	2,456.6	8.4	-21.0	0.14	0.09	-5.32	-2.3	22.4
2,645.0	2.20	69.75	2,644.5	11.5	-17.0	0.94	0.52	28.61	12.0	16.7
2,833.0	2.02	57.62	2,832.4	14.6	-10.8	0.26	-0.10	-6.45	1.3	18.1
3,022.0	1.85	103.77	3,021.3	15.6	-5.1	0.81	-0.09	24.42	8.6	14.0
3,210.0	1.93	105.00	3,209.2	14.1	1.0	0.05	0.04	0.65	2.7	13.9
3,399.0	1.76	103.42	3,398.1	12.6	6.9	0.09	-0.09	-0.84	-3.7	13.8
3,586.0	1.49	73.18	3,585.0	12.6	12.0	0.47	-0.14	-16.17	-15.1	8.6
3,774.0	1.32	81.53	3,773.0	13.7	16.5	0.14	-0.09	4.44	-18.3	11.1
3,962.0	2.64	69.14	3,960.8	15.5	22.6	0.73	0.70	-6.59	-26.7	6.4

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hearn 34 State Com
 Well: #706H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3486.0usft (H&P 653)
 MD Reference: KB = 25 @ 3486.0usft (H&P 653)
 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)
4,149.0	1.14	185.51	4,147.8	15.2	26.5	1.77	-0.80	62.23	17.7	24.9
4,336.0	0.70	100.95	4,334.8	13.1	27.4	0.68	-0.24	-45.22	-24.4	18.1
4,524.0	3.52	166.08	4,522.6	7.3	29.9	1.75	1.50	34.64	-0.1	30.8
4,711.0	4.84	156.85	4,709.1	-5.5	34.4	0.79	0.71	-4.94	-18.6	29.5
4,898.0	5.28	154.92	4,895.4	-20.6	41.2	0.25	0.24	-1.03	-36.0	28.7
5,086.0	4.40	173.64	5,082.7	-35.6	45.6	0.96	-0.47	9.96	-40.3	41.5
5,274.0	3.61	188.58	5,270.3	-48.6	45.6	0.69	-0.42	7.95	-41.2	52.3
5,462.0	3.87	187.18	5,457.9	-60.7	43.9	0.15	0.14	-0.74	-54.7	51.2
5,649.0	3.87	207.30	5,644.5	-72.6	40.2	0.72	0.00	10.76	-42.8	67.4
5,837.0	3.69	211.43	5,832.0	-83.4	34.1	0.17	-0.10	2.20	-36.6	62.9
6,024.0	3.69	208.44	6,018.7	-93.8	28.1	0.10	0.00	-1.60	-34.3	51.9
6,211.0	3.69	187.18	6,205.3	-105.1	24.5	0.73	0.00	-11.37	-42.9	32.0
6,400.0	3.61	183.22	6,393.9	-117.1	23.4	0.14	-0.04	-2.10	-37.2	28.0
6,588.0	3.61	184.63	6,581.5	-128.9	22.6	0.05	0.00	0.75	-28.7	28.1
6,775.0	3.25	182.34	6,768.2	-140.0	21.9	0.21	-0.19	-1.22	-21.4	26.5
6,963.0	2.90	186.03	6,955.9	-150.1	21.2	0.21	-0.19	1.96	-10.1	26.7
7,150.0	5.10	190.08	7,142.5	-163.0	19.3	1.19	1.18	2.17	-1.9	24.9
7,338.0	5.54	191.39	7,329.6	-180.1	16.0	0.24	0.23	0.70	0.7	21.8
7,523.0	5.54	190.08	7,513.8	-197.7	12.7	0.07	0.00	-0.71	1.4	18.9
7,711.0	4.84	189.64	7,701.0	-214.4	9.8	0.37	-0.37	-0.23	3.8	16.1
7,899.0	4.66	188.58	7,888.4	-229.8	7.3	0.11	-0.10	-0.56	6.1	13.9
8,085.0	4.31	183.04	8,073.8	-244.2	5.8	0.30	-0.19	-2.98	-2.1	13.5
8,273.0	3.96	195.88	8,261.3	-257.5	3.6	0.53	-0.19	6.83	-12.3	15.2
8,460.0	1.58	227.34	8,448.1	-265.5	0.0	1.46	-1.27	16.82	-10.7	22.7
8,646.0	0.79	283.24	8,634.0	-266.9	-3.2	0.71	-0.42	30.05	10.1	23.7
8,833.0	1.14	272.34	8,821.0	-266.6	-6.3	0.21	0.19	-5.83	2.3	25.0
9,021.0	0.70	86.72	9,009.0	-266.4	-7.0	0.98	-0.23	92.76	0.8	-24.9

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn's 34 State Com
Well: #706H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25 @ 3486.0usft (H&P 653)
MD Reference: KB = 25 @ 3486.0usft (H&P 653)
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)
9,208.0	1.06	75.11	9,196.0	-265.9	-4.2	0.21	0.19	-6.21	3.0	-24.4
9,395.0	0.53	31.35	9,383.0	-264.7	-2.1	0.41	-0.28	-23.40	16.9	-16.8
9,582.0	0.53	332.37	9,570.0	-263.2	-2.0	0.28	0.00	-31.54	21.8	5.1
9,770.0	0.79	7.09	9,758.0	-261.2	-2.3	0.25	0.14	18.47	18.8	-7.7
9,957.0	0.70	326.39	9,944.9	-258.9	-2.7	0.28	-0.05	-21.76	17.2	5.6
10,144.0	1.23	261.09	10,131.9	-258.3	-5.3	0.61	0.28	-34.92	-0.4	16.9
10,331.0	1.76	239.56	10,318.9	-260.1	-9.8	0.41	0.28	-11.51	-11.3	14.9
10,520.0	2.37	227.52	10,507.7	-264.2	-15.2	0.39	0.32	-6.37	-20.9	11.6
10,707.0	2.46	263.99	10,694.6	-267.2	-22.0	0.81	0.05	19.50	-17.0	24.0
10,896.0	2.64	250.02	10,883.4	-269.1	-30.2	0.34	0.10	-7.39	-30.6	18.2
11,083.0	2.46	313.39	11,070.2	-267.8	-37.1	1.43	-0.10	33.89	-3.4	39.4
11,269.0	2.46	304.95	11,256.1	-262.8	-43.3	0.19	0.00	-4.54	-17.1	37.9
11,459.0	3.96	278.67	11,445.8	-259.5	-53.1	1.09	0.79	-13.83	-42.3	24.6
11,647.0	3.52	260.92	11,633.4	-259.4	-65.2	0.66	-0.23	-9.44	-59.7	8.6
11,675.0	3.52	261.62	11,661.3	-259.7	-66.9	0.15	0.00	2.50	-61.4	9.3
11,763.0	2.46	269.35	11,749.2	-260.1	-71.5	1.29	-1.20	8.78	-64.1	17.8
11,856.0	1.58	301.96	11,842.2	-259.4	-74.6	1.52	-0.95	35.06	-47.4	50.6
11,904.0	4.57	4.54	11,890.1	-257.2	-75.0	8.52	6.23	130.37	20.9	66.0
11,950.0	12.49	10.87	11,935.5	-250.4	-73.9	17.31	17.22	13.76	20.8	63.6
11,998.0	20.93	5.94	11,981.5	-236.8	-72.0	17.81	17.58	-10.27	1.8	64.6
12,044.0	28.05	7.53	12,023.3	-217.9	-69.8	15.54	15.48	3.46	-13.1	64.7
12,092.0	34.47	14.29	12,064.3	-193.5	-64.9	15.22	13.37	14.08	-25.1	66.0
12,138.0	38.60	17.37	12,101.3	-167.2	-57.4	9.82	8.98	6.70	-41.0	65.1
12,185.0	41.15	17.81	12,137.4	-138.4	-48.3	5.46	5.43	0.94	-59.1	60.5
12,231.0	42.56	17.72	12,171.6	-109.2	-39.0	3.07	3.07	-0.20	-74.7	53.2
12,279.0	44.93	14.21	12,206.3	-77.3	-29.9	7.07	4.94	-7.31	-89.1	40.4
12,325.0	47.04	10.08	12,238.3	-45.0	-22.9	7.92	4.59	-8.98	-98.2	27.4

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hearn 34 State Com
 Well: #706H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3486.0usft (H&P 653)
 MD Reference: KB = 25 @ 3486.0usft (H&P 653)
 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)
12,372.0	48.19	8.93	12,269.9	-10.7	-17.2	3.04	2.45	-2.45	-101.2	18.8
12,419.0	51.18	6.21	12,300.4	24.8	-12.5	7.74	6.36	-5.79	-99.7	9.4
12,424.4	51.90	5.59	12,303.7	29.0	-12.1	16.01	13.26	-11.44	-99.3	8.2
HL Crossing, MD:12424.4', TVD:12303.7', N/S:29.0', E/W:-12.1', INC:51.90										
12,466.0	57.51	1.20	12,327.8	62.8	-10.1	16.01	13.49	-10.56	-95.8	1.5
12,513.0	62.17	358.30	12,351.4	103.5	-10.3	11.26	9.91	-6.17	-90.3	-0.5
12,560.0	63.58	357.51	12,372.8	145.3	-11.8	3.35	3.00	-1.68	-81.8	0.7
12,606.0	63.40	356.98	12,393.3	186.4	-13.8	1.10	-0.39	-1.15	-68.7	2.8
12,654.0	66.39	358.47	12,413.7	229.8	-15.5	6.83	6.23	3.10	-51.3	4.8
12,701.0	70.52	0.41	12,430.9	273.5	-15.9	9.59	8.79	4.13	-33.7	4.8
12,748.0	75.89	0.23	12,444.5	318.5	-15.7	11.43	11.43	-0.38	-19.8	4.1
12,795.0	81.69	0.67	12,453.7	364.6	-15.3	12.37	12.34	0.94	-10.2	3.3
12,843.0	87.85	1.64	12,458.0	412.3	-14.4	12.99	12.83	2.02	-5.4	1.9
12,908.0	89.52	1.02	12,459.5	477.3	-12.8	2.74	2.57	-0.95	-3.3	-0.1
13,002.0	89.78	0.85	12,460.1	571.3	-11.3	0.33	0.28	-0.18	-1.8	-2.3
13,096.0	89.34	359.79	12,460.8	665.3	-10.8	1.22	-0.47	-1.13	-0.2	-3.5
13,189.0	88.64	359.35	12,462.5	758.3	-11.5	0.89	-0.75	-0.47	2.3	-3.5
13,283.0	88.72	359.09	12,464.6	852.2	-12.8	0.29	0.09	-0.28	5.4	-2.9
13,377.0	89.87	357.60	12,465.8	946.2	-15.5	2.00	1.22	-1.59	7.4	-0.9
13,471.0	91.28	359.00	12,464.8	1,040.1	-18.3	2.11	1.50	1.49	7.4	1.2
13,564.0	92.59	358.65	12,461.7	1,133.0	-20.2	1.46	1.41	-0.38	5.1	2.4
13,659.0	92.86	359.44	12,457.2	1,227.9	-21.8	0.88	0.28	0.83	1.5	3.3
13,753.0	90.22	0.85	12,454.6	1,321.9	-21.5	3.18	-2.81	1.50	-0.2	2.4
13,846.0	89.16	0.50	12,455.2	1,414.9	-20.4	1.20	-1.14	-0.38	1.2	0.6
13,940.0	89.87	1.02	12,455.9	1,508.9	-19.2	0.94	0.76	0.55	2.9	-1.3
14,034.0	89.78	1.73	12,456.2	1,602.8	-16.9	0.76	-0.10	0.76	4.1	-4.3
14,127.0	90.31	1.81	12,456.2	1,695.8	-14.0	0.58	0.57	0.09	4.9	-7.9

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn's 34 State Com
Well: #706H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25 @ 3486.0usft (H&P 653)
MD Reference: KB = 25 @ 3486.0usft (H&P 653)
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)
14,221.0	90.31	1.81	12,455.7	1,789.7	-11.1	0.00	0.00	0.00	5.3	-11.5
14,315.0	91.10	359.97	12,454.5	1,883.7	-9.6	2.13	0.84	-1.96	5.0	-13.7
14,408.0	90.75	358.91	12,453.0	1,976.7	-10.5	1.20	-0.38	-1.14	4.4	-13.5
14,502.0	90.22	0.14	12,452.2	2,070.7	-11.3	1.42	-0.56	1.31	4.5	-13.4
14,596.0	89.78	359.97	12,452.2	2,164.7	-11.2	0.50	-0.47	-0.18	5.4	-14.2
14,691.0	90.84	358.47	12,451.7	2,259.7	-12.5	1.93	1.12	-1.58	5.7	-13.6
14,785.0	90.48	358.65	12,450.6	2,353.6	-14.9	0.43	-0.38	0.19	5.6	-11.9
14,879.0	90.40	358.56	12,449.9	2,447.6	-17.2	0.13	-0.09	-0.10	5.7	-10.3
14,973.0	89.96	358.39	12,449.6	2,541.6	-19.7	0.50	-0.47	-0.18	6.3	-8.5
15,067.0	91.19	358.65	12,448.6	2,635.5	-22.1	1.34	1.31	0.28	6.3	-6.8
15,160.0	91.45	359.62	12,446.5	2,728.5	-23.5	1.08	0.28	1.04	5.0	-6.0
15,254.0	91.19	359.09	12,444.3	2,822.5	-24.5	0.63	-0.28	-0.56	3.7	-5.7
15,347.0	91.71	359.97	12,442.0	2,915.4	-25.3	1.10	0.56	0.95	2.3	-5.6
15,442.0	91.71	0.23	12,439.1	3,010.4	-25.1	0.27	0.00	0.27	0.3	-6.5
15,536.0	91.63	0.06	12,436.4	3,104.4	-24.9	0.20	-0.09	-0.18	-1.5	-7.4
15,630.0	91.54	0.14	12,433.8	3,198.3	-24.7	0.13	-0.10	0.09	-3.2	-8.3
15,724.0	90.57	0.23	12,432.1	3,292.3	-24.4	1.04	-1.03	0.10	-4.1	-9.3
15,818.0	90.48	1.20	12,431.2	3,386.3	-23.3	1.04	-0.10	1.03	-4.1	-11.1
15,911.0	89.16	0.85	12,431.5	3,479.3	-21.6	1.47	-1.42	-0.38	-2.9	-13.5
16,005.0	88.90	1.46	12,433.1	3,573.2	-19.7	0.71	-0.28	0.65	-0.4	-16.1
16,099.0	89.52	359.35	12,434.4	3,667.2	-19.0	2.34	0.66	-2.24	1.8	-17.4
16,193.0	90.04	359.88	12,434.8	3,761.2	-19.7	0.79	0.55	0.56	3.0	-17.5
16,287.0	89.34	359.62	12,435.3	3,855.2	-20.1	0.79	-0.74	-0.28	4.4	-17.8
16,381.0	88.64	0.23	12,436.9	3,949.2	-20.2	0.99	-0.74	0.65	7.0	-18.3
16,475.0	89.43	359.00	12,438.5	4,043.2	-20.8	1.55	0.84	-1.31	9.4	-18.4
16,568.0	88.99	358.56	12,439.8	4,136.1	-22.8	0.67	-0.47	-0.47	11.6	-17.1
16,672.0	88.64	358.03	12,441.9	4,240.1	-25.9	0.61	-0.34	-0.51	14.7	-14.8

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn 34 State Com
Well: #706H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25 @ 3486.0usft (H&P 653)
MD Reference: KB = 25 @ 3486.0usft (H&P 653)
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)
16,766.0	88.99	359.44	12,443.9	4,334.0	-28.0	1.55	0.37	1.50	17.6	-13.4
16,860.0	90.13	359.53	12,444.6	4,428.0	-28.8	1.22	1.21	0.10	19.2	-13.3
16,954.0	92.59	358.74	12,442.4	4,522.0	-30.3	2.75	2.62	-0.84	17.8	-12.5
17,047.0	92.42	359.62	12,438.3	4,614.9	-31.6	0.96	-0.18	0.95	14.7	-11.9
17,141.0	91.10	358.83	12,435.4	4,708.8	-32.9	1.64	-1.40	-0.84	12.7	-11.3
17,236.0	90.57	358.30	12,434.0	4,803.8	-35.2	0.79	-0.56	-0.56	12.2	-9.6
17,330.0	90.31	358.30	12,433.3	4,897.7	-38.0	0.28	-0.28	0.00	12.3	-7.5
17,425.0	90.22	358.39	12,432.9	4,992.7	-40.8	0.13	-0.09	0.09	12.8	-5.5
17,519.0	89.78	357.77	12,432.9	5,086.6	-43.9	0.81	-0.47	-0.66	13.0	-3.0
17,613.0	90.57	358.30	12,432.6	5,180.6	-47.1	1.01	0.84	0.56	12.7	-0.5
17,706.0	89.52	358.74	12,432.5	5,273.6	-49.5	1.22	-1.13	0.47	12.6	1.2
17,800.0	90.48	358.56	12,432.5	5,367.5	-51.8	1.04	1.02	-0.19	12.6	2.8
17,894.0	88.20	1.46	12,433.6	5,461.5	-51.7	3.92	-2.43	3.09	13.7	2.0
17,988.0	89.08	2.43	12,435.8	5,555.4	-48.5	1.39	0.94	1.03	15.9	-1.8
18,081.0	90.84	0.85	12,435.9	5,648.4	-45.9	2.54	1.89	-1.70	16.0	-5.2
18,175.0	89.08	0.85	12,436.0	5,742.4	-44.5	1.87	-1.87	0.00	16.1	-7.2
18,269.0	89.34	0.93	12,437.3	5,836.3	-43.0	0.29	0.28	0.09	17.3	-9.4
18,362.0	89.25	359.27	12,438.4	5,929.3	-42.9	1.79	-0.10	-1.78	18.5	-10.2
18,455.0	88.99	0.41	12,439.8	6,022.3	-43.1	1.26	-0.28	1.23	19.9	-10.7
18,549.0	89.52	359.79	12,441.0	6,116.3	-43.0	0.87	0.56	-0.66	21.1	-11.5
18,644.0	92.51	359.62	12,439.4	6,211.3	-43.5	3.15	3.15	-0.18	19.4	-11.7
18,738.0	92.33	359.53	12,435.4	6,305.2	-44.2	0.21	-0.19	-0.10	15.5	-11.7
18,832.0	89.96	359.70	12,433.5	6,399.2	-44.8	2.53	-2.52	0.18	13.6	-11.8
18,926.0	90.04	359.18	12,433.5	6,493.2	-45.7	0.56	0.09	-0.55	13.6	-11.5
19,020.0	90.84	358.74	12,432.8	6,587.1	-47.4	0.97	0.85	-0.47	12.9	-10.5
19,113.0	88.55	359.97	12,433.3	6,680.1	-48.5	2.80	-2.46	1.32	13.3	-10.1
19,207.0	89.87	0.23	12,434.6	6,774.1	-48.3	1.43	1.40	0.28	14.6	-11.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3486.0usft (H&P 653)
Site:	Hearns 34 State Com	MD Reference:	KB = 25 @ 3486.0usft (H&P 653)
Well:	#706H	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)
19,301.0	89.69	359.62	12,434.9	6,868.1	-48.4	0.68	-0.19	-0.65	15.0	-11.6
19,394.0	88.81	359.79	12,436.2	6,961.1	-48.9	0.96	-0.95	0.18	16.2	-11.8
19,486.0	88.46	0.06	12,438.4	7,053.1	-49.0	0.48	-0.38	0.29	18.4	-12.3
19,580.0	88.99	356.89	12,440.5	7,147.0	-51.5	3.42	0.56	-3.37	20.5	-10.5
19,673.0	89.08	357.33	12,442.0	7,239.9	-56.2	0.48	0.10	0.47	22.1	-6.5
19,767.0	88.81	356.89	12,443.7	7,333.7	-60.9	0.55	-0.29	-0.47	23.8	-2.4
19,860.0	89.69	359.27	12,445.0	7,426.7	-64.1	2.73	0.95	2.56	25.0	0.0
19,953.0	89.78	359.35	12,445.4	7,519.7	-65.2	0.13	0.10	0.09	25.4	0.5
20,047.0	90.84	358.91	12,444.9	7,613.7	-66.6	1.22	1.13	-0.47	24.9	1.2
20,140.0	90.40	359.09	12,443.9	7,706.6	-68.2	0.51	-0.47	0.19	23.9	2.1
20,234.0	90.31	358.47	12,443.3	7,800.6	-70.2	0.67	-0.10	-0.66	23.3	3.4
20,328.0	90.84	359.00	12,442.4	7,894.6	-72.3	0.80	0.56	0.56	22.4	4.8
20,421.0	91.19	358.56	12,440.7	7,987.5	-74.3	0.60	0.38	-0.47	20.7	6.1
20,514.0	88.99	359.00	12,440.6	8,080.5	-76.3	2.41	-2.37	0.47	20.0	7.4
20,608.0	90.57	357.07	12,440.9	8,174.5	-79.5	2.65	1.68	-2.05	19.7	10.0
20,701.0	89.08	358.47	12,441.2	8,267.4	-83.1	2.20	-1.60	1.51	19.3	12.9
20,794.0	87.85	359.09	12,443.7	8,360.3	-85.1	1.48	-1.32	0.67	21.1	14.2
20,888.0	88.55	0.85	12,446.7	8,454.3	-85.1	2.01	0.74	1.87	23.3	13.6
20,982.0	89.87	0.67	12,447.9	8,548.3	-83.9	1.42	1.40	-0.19	23.9	11.6
21,076.0	89.69	1.20	12,448.3	8,642.2	-82.4	0.60	-0.19	0.56	23.6	9.4
21,170.0	91.10	1.55	12,447.7	8,736.2	-80.1	1.55	1.50	0.37	22.2	6.5
21,264.0	91.63	359.09	12,445.4	8,830.2	-79.6	2.68	0.56	-2.62	19.3	5.3
21,357.0	89.16	359.18	12,444.8	8,923.2	-81.0	2.66	-2.66	0.10	18.0	6.0
21,451.0	88.55	358.47	12,446.7	9,017.1	-82.9	1.00	-0.65	-0.76	19.1	7.2
21,545.0	88.90	357.68	12,448.7	9,111.0	-86.1	0.92	0.37	-0.84	20.5	9.7
21,638.0	89.34	0.58	12,450.2	9,204.0	-87.5	3.15	0.47	3.12	21.3	10.4
21,732.0	89.78	0.32	12,450.9	9,298.0	-86.7	0.54	0.47	-0.28	21.3	9.0

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn's 34 State Com
Well: #706H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25 @ 3486.0usft (H&P 653)
MD Reference: KB = 25 @ 3486.0usft (H&P 653)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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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)
21,826.0	88.81	359.09	12,452.1	9,392.0	-87.2	1.67	-1.03	-1.31	21.7	8.8
21,919.0	89.69	0.23	12,453.3	9,485.0	-87.8	1.55	0.95	1.23	22.3	8.7
22,013.0	90.92	2.08	12,452.8	9,578.9	-85.9	2.36	1.31	1.97	21.1	6.1
22,107.0	89.87	359.70	12,452.1	9,672.9	-84.4	2.77	-1.12	-2.53	19.7	4.0
22,201.0	90.22	359.09	12,452.1	9,766.9	-85.4	0.75	0.37	-0.65	18.9	4.3
22,257.0	90.22	359.09	12,451.8	9,822.9	-86.3	0.00	0.00	0.00	18.3	4.7
22,289.0	90.92	359.97	12,451.5	9,854.9	-86.6	3.51	2.19	2.75	17.8	4.8
Final MWD Survey (MD=22289.0')										
22,345.0	90.92	359.97	12,450.6	9,910.9	-86.6	0.00	0.00	0.00	16.4	4.4
Final Projection to Bit (MD=22345.0')										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,424.4	12,303.7	29.0	-12.1	HL Crossing, MD:12424.4', TVD:12303.7', N/S:29.0', E/W:-12.1', INC:51.90
22,289.0	12,451.5	9,854.9	-86.6	Final MWD Survey (MD=22289.0')
22,345.0	12,450.6	9,910.9	-86.6	Final Projection to Bit (MD=22345.0')

Checked By: _____ Approved By: _____ Date: _____