



Lea County, NM (NAD 27 NME)

Hawk 35 Fed #3H

H&P 621

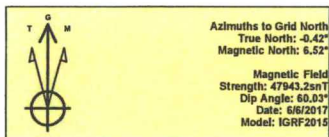
Plan #2

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

WELL DETAILS: #3H

KB = 25 @ 3535.0usR (H&P 621) 3510.0
Northing 430042.00 Easting 743929.00 Latitude 32° 10' 47.443 N Longitude 103° 32' 41.713 W



To convert a Magnetic Direction to a Grid Direction, Add 6.52°
To convert a Magnetic Direction to a True Direction, Add 6.94°
To convert a True Direction to a Grid Direction, Subtract 6.42°

SECTION DETAILS

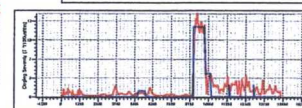
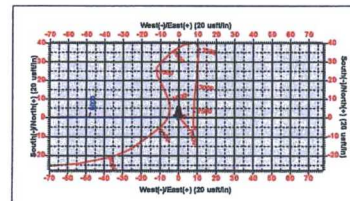
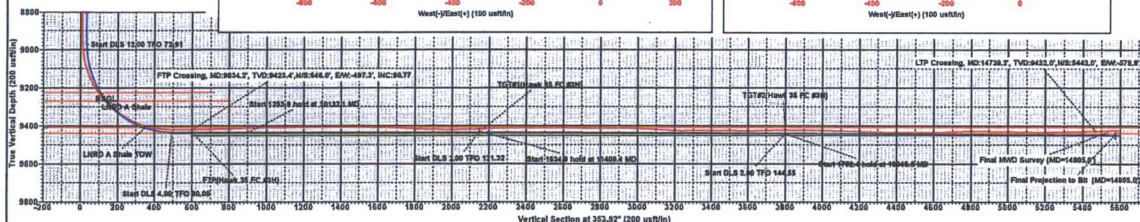
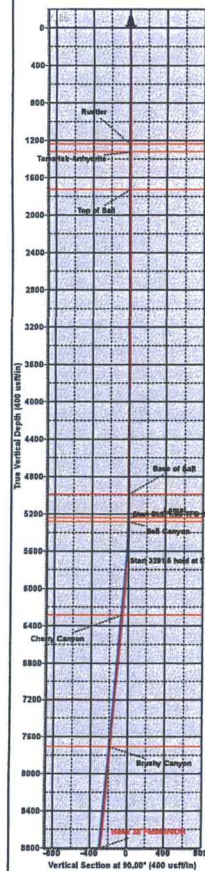
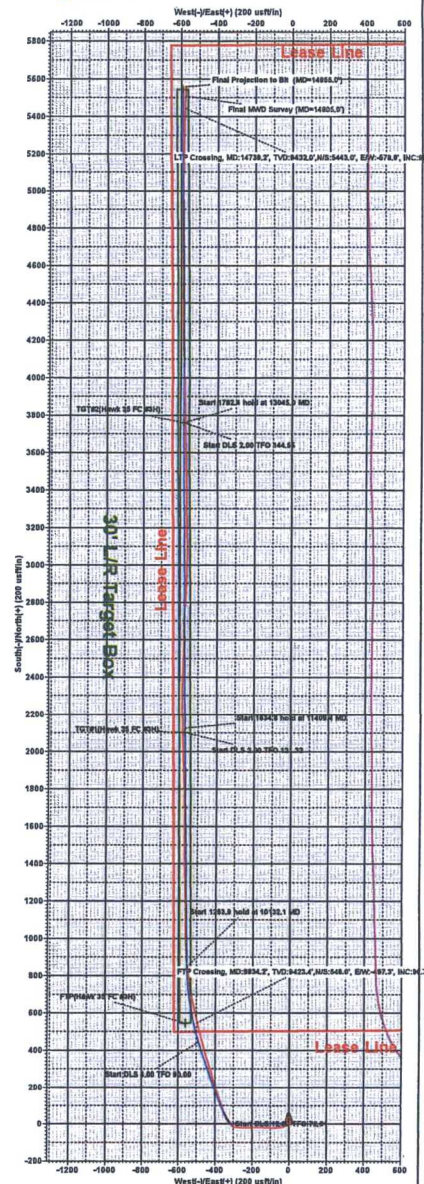
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	Tface	Vsect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	5200.0	0.00	0.00	5200.0	0.0	0.0	0.00	0.00	0.0		
3	5703.3	5.03	270.00	5702.7	0.0	-22.1	1.00	270.00	2.3		
4	8984.8	5.03	270.00	8971.5	0.0	-310.0	0.00	0.00	32.8		
5	9722.4	90.00	342.86	9435.0	444.5	-489.0	12.00	72.51	493.7		
6	10132.1	90.00	359.24	9435.0	947.9	-651.5	4.00	90.00	901.5		
7	11388.1	90.00	359.24	9435.0	2101.7	-568.3	0.00	0.00	2150.0	TGT#1(Hawk 35 FC #3H)	
8	11409.4	89.76	359.64	9435.0	2125.0	-568.5	2.00	121.32	2173.3	TGT#2(Hawk 35 FC #3H)	
9	13044.2	89.76	359.64	9442.0	3759.0	-678.9	0.00	0.00	3800.0		
10	13045.0	89.74	359.64	9442.0	3760.6	-678.9	2.00	144.55	3800.8		
11	14827.5	89.74	359.64	9450.0	6543.0	-590.0	0.00	0.00	5574.3	PBHL(Hawk 35 FC #3H)	

CASING DETAILS
No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
TGT#1(Hawk 35 FC #3H)	9435.0	2101.7	-568.3	432143.70	743360.71
TGT#2(Hawk 35 FC #3H)	9442.0	3759.0	-678.9	433801.80	743350.08
PBHL(Hawk 35 FC #3H)	9450.0	6543.0	-590.0	435585.00	743359.00
FTP(Hawk 35 FC #3H)	9435.0	546.0	-658.0	430589.00	743370.00

HOBBS OCD
SEP 13 2017
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EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Hawk 35 Fed

#3H

OH

Design: OH

PVA Report

29 June, 2017

PVA Report

Company: EOG Resources - Midland Project: Lea County, NM (NAD 27 NME) Site: Hawk 35 Fed Well: #3H Wellbore: OH Design: OH		Local Co-ordinate Reference: Well #3H TVD Reference: KB = 25 @ 3535.0usft (H&P 621) MD Reference: KB = 25 @ 3535.0usft (H&P 621) North Reference: Grid Survey Calculation Method: Minimum Curvature Database: EDM 5000.14													
Project Lea County, NM (NAD 27 NME)															
Map System: US State Plane 1927 (Exact solution) Geo Datum: NAD 1927 (NADCON CONUS) Map Zone: New Mexico East 3001		System Datum: Mean Sea Level													
Site Hawk 35 Fed															
Site Position: From: Map Position Uncertainty: 0.0 usft		Northing: 430,058.00 usft Easting: 746,582.00 usft Slot Radius: 13-3/16 "													
		Latitude: 32° 10' 47.408 N Longitude: 103° 32' 10.844 W Grid Convergence: 0.42 °													
Well #3H															
Well Position +N/-S 0.0 usft +E/-W 0.0 usft Position Uncertainty 0.0 usft		Northing: 430,042.00 usft Easting: 743,929.00 usft Wellhead Elevation: usft													
		Latitude: 32° 10' 47.443 N Longitude: 103° 32' 41.713 W Ground Level: 3,510.0 usft													
Wellbore OH															
<table border="1"> <thead> <tr> <th>Magnetics</th> <th>Model Name</th> <th>Sample Date</th> <th>Declination (°)</th> <th>Dip Angle (°)</th> <th>Field Strength (nT)</th> </tr> </thead> <tbody> <tr> <td></td> <td>IGRF2015</td> <td>6/6/2017</td> <td>6.94</td> <td>60.03</td> <td>47,943.15711207</td> </tr> </tbody> </table>				Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)		IGRF2015	6/6/2017	6.94	60.03	47,943.15711207
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)										
	IGRF2015	6/6/2017	6.94	60.03	47,943.15711207										
Design OH															
Audit Notes: Version: 1.0 Phase: ACTUAL Tie On Depth: 0.0															
<table border="1"> <thead> <tr> <th>Vertical Section:</th> <th>Depth From (TVD) (usft)</th> <th>+N/-S (usft)</th> <th>+E/-W (usft)</th> <th>Direction (°)</th> </tr> </thead> <tbody> <tr> <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>353.92</td> </tr> </tbody> </table>				Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)		0.0	0.0	0.0	353.92		
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)											
	0.0	0.0	0.0	353.92											

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hawk 35 Fed
 Well: #3H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #3H
 TVD Reference: KB = 25 @ 3535.0usft (H&P 621)
 MD Reference: KB = 25 @ 3535.0usft (H&P 621)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey Program		Date 6/29/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
118.9	1,305.9	Invictus MWD (OH)	MWD	MWD - Standard	
1,419.0	14,855.0	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
118.9	0.60	142.00	118.9	-0.5	0.4	0.50	0.50	0.00	-0.6	0.0
125.9	0.60	150.00	125.9	-0.6	0.4	1.20	0.00	114.29	-0.7	0.1
149.9	0.90	148.00	149.9	-0.8	0.6	1.25	1.25	-8.33	-1.0	0.1
178.9	0.90	145.00	178.9	-1.2	0.8	0.16	0.00	-10.34	-1.5	0.0
207.9	1.00	133.00	207.9	-1.6	1.2	0.77	0.34	-41.38	-1.9	-0.4
276.9	0.80	138.00	276.9	-2.3	1.9	0.31	-0.29	7.25	-3.0	-0.1
304.9	1.00	136.00	304.9	-2.6	2.2	0.72	0.71	-7.14	-3.4	-0.2
333.9	0.90	125.00	333.9	-3.0	2.6	0.72	-0.34	-37.93	-3.8	-0.9
364.9	0.80	133.00	364.9	-3.2	2.9	0.50	-0.32	25.81	-4.4	-0.4
396.9	1.00	139.00	396.9	-3.6	3.3	0.69	0.62	18.75	-4.9	0.1
427.9	0.60	147.00	427.9	-4.0	3.5	1.34	-1.29	25.81	-5.2	0.8
458.9	0.60	138.00	458.9	-4.2	3.7	0.30	0.00	-29.03	-5.6	0.0
488.9	0.60	158.00	488.9	-4.5	3.9	0.69	0.00	66.67	-5.6	2.0
519.9	0.90	149.00	519.9	-4.8	4.1	1.04	0.97	-29.03	-6.3	1.0
551.9	0.70	137.00	551.9	-5.2	4.4	0.81	-0.62	-37.50	-6.8	-0.4
582.9	0.70	156.00	582.9	-5.5	4.6	0.75	0.00	61.29	-6.9	1.9
613.9	0.80	144.00	613.8	-5.8	4.8	0.60	0.32	-38.71	-7.5	0.4
644.9	0.60	134.00	644.8	-6.1	5.0	0.75	-0.65	-32.26	-7.9	-0.9
708.9	0.50	138.00	708.8	-6.6	5.4	0.17	-0.16	6.25	-8.5	-0.4
740.9	0.50	137.00	740.8	-6.8	5.6	0.03	0.00	-3.12	-8.8	-0.5

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hawk 35 Fed
 Well: #3H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #3H
 TVD Reference: KB = 25 @ 3535.0usft (H&P 621)
 MD Reference: KB = 25 @ 3535.0usft (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)
771.9	0.50	103.00	771.8	-6.9	5.9	0.94	0.00	-109.68	-7.3	-5.4
802.9	0.50	85.00	802.8	-6.9	6.1	0.50	0.00	-58.06	-5.5	-7.4
866.9	0.50	99.00	866.8	-6.9	6.7	0.19	0.00	21.87	-7.7	-5.8
960.9	0.50	60.00	960.8	-6.8	7.4	0.36	0.00	-41.49	-3.0	-9.6
1,023.9	0.40	80.00	1,023.8	-6.6	7.9	0.29	-0.16	31.75	-6.6	-7.9
1,055.9	0.40	71.00	1,055.8	-6.6	8.1	0.20	0.00	-28.12	-5.5	-8.9
1,086.9	0.40	68.00	1,086.8	-6.5	8.3	0.07	0.00	-9.68	-5.3	-9.1
1,117.9	0.50	98.00	1,117.8	-6.5	8.5	0.81	0.32	96.77	-9.4	-5.2
1,148.9	0.30	56.00	1,148.8	-6.5	8.7	1.10	-0.65	-135.48	-3.6	-10.2
1,179.9	0.20	40.00	1,179.8	-6.4	8.8	0.39	-0.32	-51.61	-0.8	-10.9
1,242.9	0.20	355.00	1,242.8	-6.2	8.9	0.24	0.00	-71.43	6.9	-8.3
1,273.9	0.10	158.00	1,273.8	-6.1	8.9	0.96	-0.32	525.81	-9.0	6.0
1,305.9	0.20	311.00	1,305.8	-6.1	8.9	0.91	0.31	478.12	10.7	-1.2
1,419.0	0.60	324.10	1,418.9	-5.5	8.4	0.36	0.35	11.58	9.4	-3.6
1,608.0	0.50	343.20	1,607.9	-3.9	7.6	0.11	-0.05	10.11	6.0	-6.1
1,796.0	0.30	31.70	1,795.9	-2.7	7.6	0.20	-0.11	25.80	-1.7	-7.9
1,985.0	0.40	339.10	1,984.9	-1.7	7.6	0.17	0.05	-27.83	4.3	-6.5
2,173.0	0.40	12.40	2,172.9	-0.4	7.5	0.12	0.00	17.71	-1.2	-7.4
2,362.0	0.70	5.20	2,361.9	1.4	7.8	0.16	0.16	-3.81	-2.1	-7.6
2,547.0	0.90	359.00	2,546.9	3.9	7.8	0.12	0.11	-3.35	-3.8	-7.9
2,736.0	1.50	2.50	2,735.8	7.9	7.9	0.32	0.32	1.85	-8.2	-7.6
2,924.0	2.20	8.20	2,923.7	13.9	8.5	0.38	0.37	3.03	-15.0	-6.5
3,113.0	2.40	5.30	3,112.6	21.5	9.4	0.12	0.11	-1.53	-22.2	-7.4
3,301.0	2.20	359.10	3,300.4	29.0	9.7	0.17	-0.11	-3.30	-28.8	-10.2
3,490.0	2.40	14.10	3,489.3	36.4	10.6	0.33	0.11	7.94	-37.9	-1.4
3,679.0	1.80	266.80	3,678.2	40.1	8.6	1.80	-0.32	-56.77	10.9	-39.6
3,867.0	2.10	252.00	3,866.1	38.9	2.4	0.31	0.16	-7.87	14.3	-36.2

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hawk 35 Fed
 Well: #3H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #3H
 TVD Reference: KB = 25 @ 3535.0usft (H&P 621)
 MD Reference: KB = 25 @ 3535.0usft (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)
4,056.0	2.50	227.90	4,055.0	35.1	-3.9	0.55	0.21	-12.75	20.6	-28.7
4,245.0	1.80	224.60	4,243.8	30.2	-9.1	0.38	-0.37	-1.75	15.1	-27.7
4,434.0	1.20	214.00	4,432.8	26.4	-12.3	0.35	-0.32	-5.61	15.0	-24.9
4,622.0	1.80	151.60	4,620.7	22.2	-12.0	0.87	0.32	-33.19	25.2	0.0
4,811.0	2.30	151.80	4,809.6	16.2	-8.8	0.26	0.26	0.11	18.5	0.0
5,000.0	2.20	162.20	4,998.4	9.4	-5.9	0.22	-0.05	5.50	10.8	-2.7
5,128.0	1.50	173.10	5,126.4	5.4	-4.9	0.61	-0.55	8.52	6.0	-4.2
5,283.0	1.80	198.00	5,281.3	1.1	-5.4	0.50	0.19	16.06	-0.4	-4.9
5,471.0	2.60	225.90	5,469.2	-4.7	-9.4	0.70	0.43	14.84	-5.4	1.2
5,659.0	3.30	233.90	5,656.9	-10.8	-16.8	0.43	0.37	4.26	-5.2	9.6
5,848.0	2.90	237.20	5,845.6	-16.6	-25.2	0.23	-0.21	1.75	-1.1	19.1
6,036.0	5.50	255.30	6,033.1	-21.5	-38.0	1.54	1.38	9.63	7.3	24.1
6,225.0	5.10	263.30	6,221.3	-24.8	-55.1	0.44	-0.21	4.23	9.7	26.1
6,413.0	5.10	268.70	6,408.6	-25.9	-71.7	0.26	0.00	2.87	11.9	26.2
6,602.0	5.20	270.80	6,596.8	-26.0	-88.7	0.11	0.05	1.11	12.5	25.8
6,791.0	5.50	272.20	6,785.0	-25.5	-106.3	0.17	0.16	0.74	12.1	25.1
6,979.0	5.60	273.20	6,972.1	-24.7	-124.4	0.07	0.05	0.53	10.8	24.1
7,168.0	5.00	275.10	7,160.3	-23.4	-141.9	0.33	-0.32	1.01	10.6	22.6
7,356.0	4.60	274.10	7,347.6	-22.2	-157.5	0.22	-0.21	-0.53	11.0	21.4
7,545.0	5.00	266.20	7,536.0	-22.2	-173.3	0.41	0.21	-4.18	8.7	22.8
7,734.0	4.80	267.00	7,724.3	-23.1	-189.4	0.11	-0.11	0.42	9.5	23.6
7,922.0	4.70	267.60	7,911.6	-23.9	-205.0	0.06	-0.05	0.32	10.6	24.3
8,111.0	4.80	269.00	8,100.0	-24.3	-220.6	0.08	0.05	0.74	12.1	24.5
8,300.0	5.10	266.10	8,288.3	-25.0	-236.9	0.21	0.16	-1.53	11.1	25.8
8,488.0	5.30	274.30	8,475.5	-24.9	-253.9	0.41	0.11	4.36	14.2	23.9
8,676.0	5.20	274.20	8,662.7	-23.7	-271.1	0.05	-0.05	-0.05	13.4	22.7
8,865.0	4.80	272.70	8,851.0	-22.7	-287.5	0.22	-0.21	-0.79	12.9	22.1

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #3H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3535.0usft (H&P 621)
Site:	Hawk 35 Fed	MD Reference:	KB = 25 @ 3535.0usft (H&P 621)
Well:	#3H	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)	
8,976.0	4.90	279.40	8,961.6	-21.7	-296.8	0.52	0.09	6.04	15.6	19.4	
9,023.0	9.10	302.50	9,008.3	-19.3	-301.9	10.59	8.94	49.15	20.8	11.2	
9,070.0	14.10	313.70	9,054.3	-13.4	-309.2	11.62	10.64	23.83	21.0	7.6	
9,117.0	19.50	324.90	9,099.3	-3.0	-317.9	13.35	11.49	23.83	20.3	4.3	
9,165.0	25.10	330.70	9,143.7	12.4	-327.5	12.52	11.67	12.08	18.4	2.8	
9,212.0	31.50	334.40	9,185.0	32.2	-337.7	14.11	13.62	7.87	15.9	1.7	
9,259.0	37.10	337.10	9,223.9	56.4	-348.5	12.34	11.91	5.74	12.8	0.6	
9,306.0	42.60	339.30	9,259.9	84.3	-359.6	12.08	11.70	4.68	9.5	-0.8	
9,353.0	47.70	339.30	9,293.1	115.5	-371.4	10.85	10.85	0.00	6.3	-1.8	
9,400.0	52.80	340.80	9,323.1	149.5	-383.7	11.12	10.85	3.19	3.4	-2.9	
9,448.0	58.70	342.80	9,350.1	187.1	-396.1	12.76	12.29	4.17	0.6	-4.7	
9,495.0	64.60	343.40	9,372.4	226.7	-408.1	12.60	12.55	1.28	-2.4	-7.0	
9,542.0	69.70	343.00	9,390.7	268.2	-420.6	10.88	10.85	-0.85	-5.2	-9.0	
9,589.0	74.90	342.70	9,405.0	310.9	-433.8	11.08	11.06	-0.64	-7.6	-10.5	
9,636.0	79.90	343.60	9,415.2	354.8	-447.1	10.80	10.64	1.91	-9.5	-11.7	
9,683.0	85.40	345.20	9,421.2	399.7	-459.6	12.18	11.70	3.40	-11.0	-13.6	
9,772.0	90.70	345.60	9,424.2	485.7	-482.0	5.97	5.96	0.45	-10.7	-17.3	
9,834.2	90.77	345.93	9,423.4	546.0	-497.3	0.54	0.11	0.53	-11.5	-17.5	
FTP Crossing, MD:9834.2', TVD:9423.4', N/S:546.0', E/W:-497.3', INC:90.77											
9,866.0	90.80	346.10	9,423.0	576.9	-505.0	0.54	0.11	0.53	-12.0	-16.6	
9,960.0	91.30	348.50	9,421.3	668.5	-525.7	2.61	0.53	2.55	-13.7	-12.1	
10,055.0	91.10	351.80	9,419.3	762.1	-541.9	3.48	-0.21	3.47	-15.7	-5.9	
10,149.0	92.40	355.10	9,416.4	855.4	-552.6	3.77	1.38	3.51	-18.6	1.0	
10,243.0	91.00	357.10	9,413.6	949.2	-559.0	2.60	-1.49	2.13	-21.3	6.1	
10,338.0	90.60	358.60	9,412.3	1,044.1	-562.6	1.63	-0.42	1.58	-22.7	8.4	
10,432.0	92.10	359.80	9,410.1	1,138.1	-563.9	2.04	1.60	1.28	-24.9	8.5	
10,526.0	91.00	358.70	9,407.6	1,232.0	-565.1	1.65	-1.17	-1.17	-27.4	8.4	

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hawk 35 Fed
 Well: #3H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #3H
 TVD Reference: KB = 25 @ 3535.0usft (H&P 621)
 MD Reference: KB = 25 @ 3535.0usft (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)
10,620.0	89.20	358.30	9,407.4	1,326.0	-567.6	1.96	-1.91	-0.43	-27.6	9.7
10,715.0	89.10	358.80	9,408.8	1,420.9	-570.0	0.54	-0.11	0.53	-26.2	10.8
10,809.0	88.70	359.80	9,410.6	1,514.9	-571.2	1.15	-0.43	1.06	-24.4	10.7
10,903.0	87.60	0.30	9,413.6	1,608.9	-571.1	1.29	-1.17	0.53	-21.3	9.4
10,998.0	87.10	359.70	9,418.0	1,703.8	-571.1	0.82	-0.53	-0.63	-17.0	8.1
11,092.0	89.00	358.90	9,421.2	1,797.7	-572.2	2.19	2.02	-0.85	-13.8	8.0
11,186.0	88.30	357.50	9,423.4	1,891.6	-575.2	1.66	-0.74	-1.49	-11.6	9.7
11,281.0	91.30	358.40	9,423.8	1,986.5	-578.6	3.30	3.16	0.95	-11.2	11.8
11,375.0	92.00	357.70	9,421.1	2,080.4	-581.8	1.05	0.74	-0.74	-13.9	13.8
11,469.0	91.60	358.50	9,418.1	2,174.3	-584.9	0.95	-0.43	0.85	-17.1	16.1
11,563.0	91.20	0.60	9,415.8	2,268.3	-585.6	2.27	-0.43	2.23	-19.8	16.2
11,658.0	89.60	1.80	9,415.2	2,363.3	-583.6	2.11	-1.68	1.26	-20.9	13.6
11,752.0	91.40	2.10	9,414.3	2,457.2	-580.4	1.94	1.91	0.32	-22.1	9.8
11,846.0	89.10	1.00	9,413.9	2,551.2	-577.9	2.71	-2.45	-1.17	-22.9	6.7
11,940.0	88.70	0.80	9,415.7	2,645.1	-576.4	0.48	-0.43	-0.21	-21.5	4.6
12,034.0	90.20	2.80	9,416.6	2,739.1	-573.5	2.66	1.60	2.13	-21.0	1.0
12,129.0	90.20	2.70	9,416.3	2,834.0	-568.9	0.11	0.00	-0.11	-21.8	-4.1
12,223.0	87.60	1.90	9,418.1	2,927.9	-565.1	2.89	-2.77	-0.85	-20.4	-8.5
12,317.0	87.40	0.10	9,422.2	3,021.8	-563.5	1.92	-0.21	-1.91	-16.7	-10.7
12,411.0	86.60	0.40	9,427.1	3,115.6	-563.1	0.91	-0.85	0.32	-12.1	-11.8
12,506.0	89.70	359.20	9,430.2	3,210.6	-563.4	3.50	3.26	-1.26	-9.5	-12.0
12,600.0	91.30	359.00	9,429.4	3,304.6	-564.9	1.72	1.70	-0.21	-10.7	-11.1
12,694.0	88.90	359.30	9,429.2	3,398.5	-566.3	2.57	-2.55	0.32	-11.3	-10.3
12,789.0	89.70	359.10	9,430.4	3,493.5	-567.6	0.87	0.84	-0.21	-10.5	-9.6
12,883.0	90.40	359.30	9,430.3	3,587.5	-568.9	0.77	0.74	0.21	-11.0	-8.9
12,977.0	91.30	358.80	9,428.9	3,681.5	-570.5	1.10	0.96	-0.53	-12.8	-8.0
13,072.0	90.90	358.40	9,427.1	3,776.4	-572.8	0.60	-0.42	-0.42	-15.0	-6.2

PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hawk 35 Fed
 Well: #3H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #3H
 KB = 25 @ 3535.0usft (H&P 621)
 KB = 25 @ 3535.0usft (H&P 621)
 Grid
 Minimum Curvature
 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)
13,166.0	89.70	359.00	9,426.6	3,870.4	-574.9	1.43	-1.28	0.64	-15.9	-4.7
13,261.0	88.30	358.30	9,428.2	3,965.4	-577.2	1.65	-1.47	-0.74	-14.7	-3.0
13,355.0	88.40	357.80	9,430.9	4,059.3	-580.4	0.54	0.11	-0.53	-12.4	-0.4
13,449.0	88.40	357.50	9,433.6	4,153.2	-584.2	0.32	0.00	-0.32	-10.2	2.8
13,544.0	88.50	358.30	9,436.1	4,248.1	-587.7	0.85	0.11	0.84	-8.1	5.7
13,638.0	89.60	0.70	9,437.7	4,342.0	-588.5	2.81	1.17	2.55	-6.9	6.0
13,732.0	90.00	0.50	9,438.0	4,436.0	-587.5	0.48	0.43	-0.21	-7.0	4.4
13,827.0	90.60	0.10	9,437.5	4,531.0	-587.0	0.76	0.63	-0.42	-7.9	3.3
13,921.0	90.90	359.00	9,436.3	4,625.0	-587.8	1.21	0.32	-1.17	-9.6	3.5
14,015.0	91.80	359.60	9,434.1	4,719.0	-588.9	1.15	0.96	0.64	-12.2	4.0
14,110.0	90.00	0.30	9,432.6	4,814.0	-589.0	2.03	-1.89	0.74	-14.1	3.5
14,205.0	88.80	0.60	9,433.6	4,909.0	-588.3	1.30	-1.26	0.32	-13.6	2.2
14,299.0	89.10	0.90	9,435.3	5,002.9	-587.0	0.45	0.32	0.32	-12.3	0.4
14,394.0	89.30	0.20	9,436.6	5,097.9	-586.1	0.77	0.21	-0.74	-11.4	-1.1
14,488.0	90.70	1.20	9,436.6	5,191.9	-585.0	1.83	1.49	1.06	-11.8	-2.8
14,582.0	91.30	1.80	9,435.0	5,285.9	-582.5	0.90	0.64	0.64	-13.9	-5.9
14,677.0	90.90	1.20	9,433.2	5,380.8	-580.0	0.76	-0.42	-0.63	-16.1	-9.0
14,739.2	91.30	1.07	9,432.0	5,443.0	-578.8	0.67	0.64	-0.21	-17.6	-10.6
LTP Crossing, MD:14739.2', TVD:9432.0', N/S:5443.0', E/W:-578.8', INC:91.30										
14,771.0	91.50	1.00	9,431.2	5,474.8	-578.2	0.67	0.64	-0.21	-18.5	-11.4
14,805.0	91.60	0.70	9,430.3	5,508.8	-577.7	0.93	0.29	-0.88	-19.6	-12.1
Final MWD Survey (MD=14805.0')										
14,855.0	91.60	0.70	9,428.9	5,558.7	-577.1	0.00	0.00	0.00	-25.0	-15.3
Final Projection to Bit (MD=14855.0')										

PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hawk 35 Fed
Well: #3H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #3H
TVD Reference: KB = 25 @ 3535.0usft (H&P 621)
MD Reference: KB = 25 @ 3535.0usft (H&P 621)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,834.2	9,423.4	546.0	-497.3	FTP Crossing, MD:9834.2', TVD:9423.4', N/S:546.0', E/W:-497.3', INC:90.77
14,739.2	9,432.0	5,443.0	-578.8	LTP Crossing, MD:14739.2', TVD:9432.0', N/S:5443.0', E/W:-578.8', INC:91.30
14,805.0	9,430.3	5,508.8	-577.7	Final MWD Survey (MD=14805.0')
14,855.0	9,428.9	5,558.7	-577.1	Final Projection to Bit (MD=14855.0')

Checked By: _____ Approved By: _____ Date: _____