



Lea County, NM (NAD 83 NME)

Condor 32 State #709H

Plan #2

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

WELL DETAILS: #709H

KB = 25' @ 3341.0usft 3316.0
Northing 398402.00 Easting 802755.00 Latitude 32° 5' 32.906 N Longitude 103° 29' 21.061 W

Azimuths to Grid North
True North: -0.45°
Magnetic North: 6.42°

Magnetic Field
Strength: 47835.0nT
Dip Angle: 59.85°
Date: 10/17/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.42°
To convert a Magnetic Direction to a True Direction, Add 6.87° East
To convert a True Direction to a Grid Direction, Subtract 0.45°

SECTION DETAILS

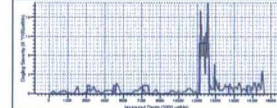
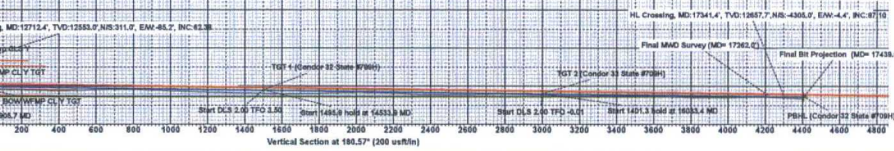
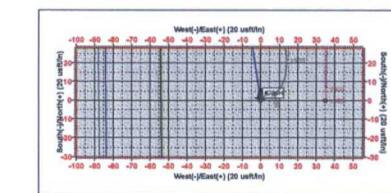
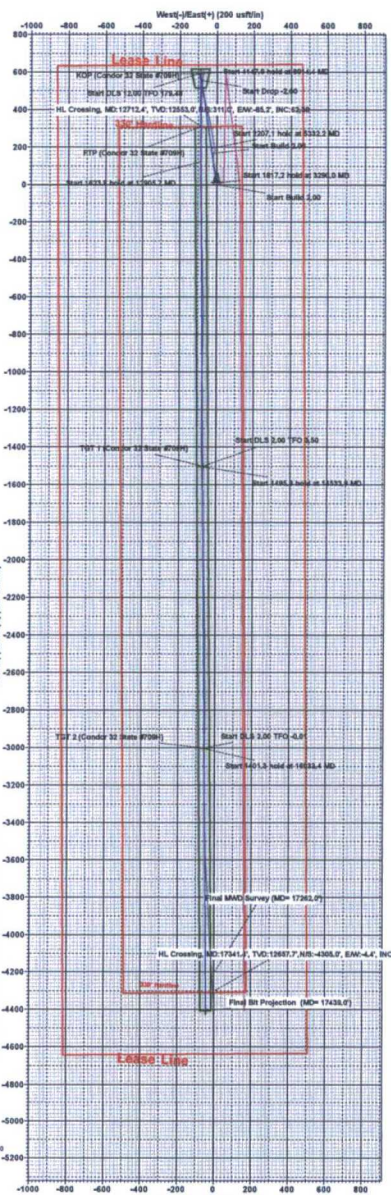
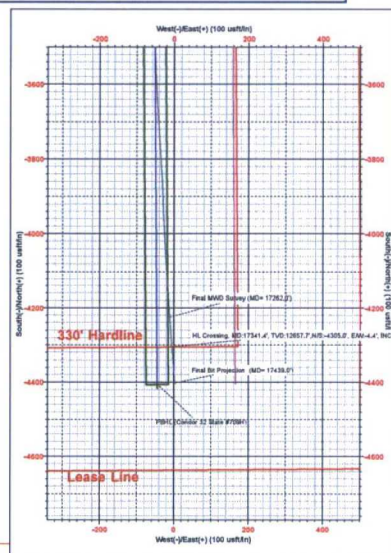
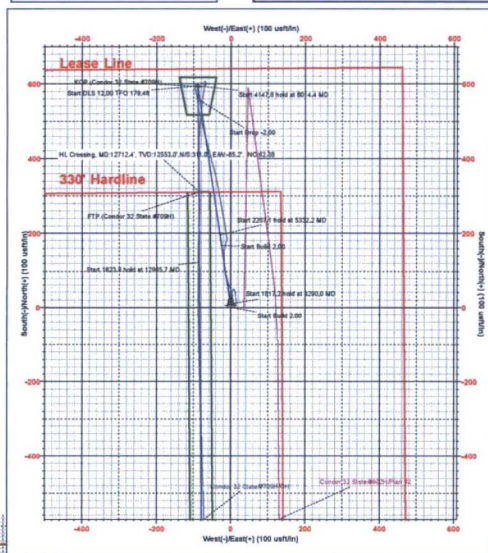
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3040.0	0.00	0.00	3040.0	0.0	0.0	0.00	0.00	0.0	
3	3290.0	5.00	351.45	3289.7	10.8	-1.6	2.00	351.45	-10.8	
4	5107.2	5.00	351.45	5100.0	167.4	-25.2	0.00	0.00	-167.1	
5	5332.2	9.50	351.45	5323.1	195.5	-29.4	2.00	0.00	-195.2	
6	7539.4	9.50	351.45	7500.0	555.7	-83.5	0.00	0.00	-554.8	
7	8014.4	0.00	0.00	7972.8	594.6	-89.4	2.00	180.00	-593.6	
8	12162.1	0.00	0.00	12120.6	594.6	-89.4	0.00	0.00	-593.6	
9	12905.7	89.22	179.48	12598.0	123.6	-85.1	12.00	179.48	-122.7	TGT 1 (Condor 32 State #709H)
10	14529.5	89.22	179.48	12620.0	-1500.0	-70.3	0.00	0.00	1500.6	TGT 2 (Condor 32 State #709H)
11	14533.9	89.31	179.48	12620.1	-1504.4	-70.2	2.00	3.50	1505.0	
12	16029.6	89.31	179.48	12638.0	-3000.0	-56.7	0.00	0.00	3000.4	
13	16033.4	89.39	179.48	12638.0	-3003.8	-56.7	2.00	-0.01	3004.2	
14	17434.8	89.39	179.48	12653.0	-4405.0	-44.0	0.00	0.00	4405.2	PBHL (Condor 32 State #709H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
Interp @ 12120.6 (#709H OH Plan #1)	12120.6	593.2	-89.2	398995.16	802665.82
KOP (Condor 32 State #709H)	12120.6	593.2	-89.2	398995.16	802665.82
FTP (Condor 32 State #709H)	12598.0	311.0	-87.0	398713.00	802668.00
TGT 1 (Condor 32 State #709H)	12620.0	-1500.0	-70.3	398902.00	802684.74
TGT 2 (Condor 32 State #709H)	12638.0	-3000.0	-56.7	398402.00	802698.30
PBHL (Condor 32 State #709H)	12653.0	-4405.0	-44.0	393997.00	802711.00



Lea County, NM (NAD 83 NME)
Condor 32 State #709H
Plan #2
11/11/2017
eog resources

HOBBS OCD

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Condor 32 State

#709H

OH

Design: OH

PVA Report

01 December, 2017



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #709H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3341.0usft
Site:	Condor 32 State	MD Reference:	KB = 25' @ 3341.0usft
Well:	#709H	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	Condor 32 State		
Site Position:		Northing:	398,890.00 usft
From:	Map	Easting:	803,604.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 5' 37.669 N
		Longitude:	103° 29' 11.148 W
		Grid Convergence:	0.45 °

Well	#709H					
Well Position	+N/-S	0.0 usft	Northing:	398,402.00 usft	Latitude:	32° 5' 32.906 N
	+E/-W	0.0 usft	Easting:	802,755.00 usft	Longitude:	103° 29' 21.061 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,316.0 usft	

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/17/2017	6.87	59.95	47,835.02484330

Design		OH		
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	180.57



PVA Report

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Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3341.0usft
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Well:	#709H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program	Date	12/1/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
176.7	862.7	invictus MWD (OH)	MWD	MWD - Standard
975.0	17,439.0	Intrepid MWD (OH)	MWD	MWD - Standard

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
176.7	0.30	17.44	176.7	0.4	0.1	0.17	0.17	0.00	-0.5	0.0
239.7	0.60	23.44	239.7	0.9	0.3	0.48	0.48	9.52	-1.0	0.1
297.7	0.20	13.44	297.7	1.3	0.5	0.70	-0.69	-17.24	-1.4	-0.2
579.7	0.40	47.44	579.7	2.4	1.3	0.09	0.07	12.06	-2.6	0.9
768.7	0.60	80.44	768.7	3.0	2.8	0.18	0.11	17.46	-3.2	2.5
862.7	1.20	70.44	862.7	3.4	4.2	0.66	0.64	-10.64	-5.1	1.8
975.0	1.70	76.60	974.9	4.2	6.9	0.47	0.45	5.48	-7.7	2.5
1,160.0	2.10	30.20	1,159.8	7.8	11.3	0.83	0.22	-25.08	-12.4	-5.8
1,345.0	2.60	8.50	1,344.7	14.9	13.6	0.55	0.27	-11.73	-16.7	-11.3
1,530.0	2.70	356.70	1,529.5	23.4	14.0	0.30	0.05	-6.38	-22.5	-15.3
1,717.0	2.90	349.70	1,716.3	32.4	12.9	0.21	0.11	-3.74	-29.6	-18.5
1,903.0	2.80	347.90	1,902.0	41.5	11.1	0.07	-0.05	-0.97	-38.2	-19.6
2,091.0	1.80	337.20	2,089.9	48.7	9.0	0.58	-0.53	-5.69	-41.4	-27.2
2,279.0	1.60	208.30	2,277.9	49.1	6.6	1.63	-0.11	-68.56	46.4	-17.5
2,466.0	1.70	208.00	2,464.8	44.4	4.0	0.05	0.05	-0.16	41.1	-17.3
2,655.0	1.60	198.90	2,653.7	39.4	1.9	0.15	-0.05	-4.81	37.9	-11.0
2,841.0	1.50	186.80	2,839.6	34.5	0.7	0.18	-0.05	-6.51	34.4	-3.3
3,027.0	1.50	150.70	3,025.6	30.0	1.6	0.50	0.00	-19.41	25.3	16.1
3,215.0	0.90	35.60	3,213.5	29.0	3.7	1.09	-0.32	-61.22	-22.0	10.2
3,403.0	2.00	357.00	3,401.5	33.5	4.4	0.75	0.59	-20.53	-12.6	-8.2



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #709H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3341.0usft
Site:	Condor 32 State	MD Reference:	KB = 25' @ 3341.0usft
Well:	#709H	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)	
3,590.0	5.20	339.20	3,588.1	44.7	1.2	1.79	1.71	-9.52	-5.2	-9.2	
3,777.0	4.40	335.60	3,774.4	59.2	-4.8	0.46	-0.43	-1.93	-4.5	-5.5	
3,965.0	5.40	347.10	3,961.8	74.3	-9.7	0.74	0.53	6.12	-5.1	-1.8	
4,152.0	5.70	348.80	4,147.9	92.0	-13.5	0.18	0.16	0.91	-7.0	-0.7	
4,339.0	5.10	346.90	4,334.0	109.2	-17.2	0.33	-0.32	-1.02	-8.3	0.1	
4,526.0	4.40	1.30	4,520.4	124.5	-18.9	0.74	-0.37	7.70	-7.2	1.4	
4,714.0	5.90	357.50	4,707.6	141.4	-19.1	0.82	0.80	-2.02	-7.8	-1.3	
4,902.0	4.70	11.30	4,894.8	158.6	-18.1	0.93	-0.64	7.34	-9.6	-2.6	
5,089.0	3.80	18.40	5,081.3	172.0	-14.6	0.56	-0.48	3.80	-9.1	-7.9	
5,248.0	3.30	14.50	5,240.0	181.4	-11.8	0.35	-0.31	-2.45	-2.5	-15.6	
5,435.0	7.60	350.20	5,426.2	198.8	-12.5	2.56	2.30	-12.99	16.6	-16.8	
5,623.0	10.70	350.50	5,611.7	228.3	-17.5	1.65	1.65	0.16	17.6	-16.3	
5,810.0	10.90	349.50	5,795.4	262.8	-23.6	0.15	0.11	-0.53	13.7	-15.3	
5,998.0	11.20	349.60	5,979.9	298.2	-30.2	0.16	0.16	0.05	8.5	-14.2	
6,186.0	11.20	348.20	6,164.4	334.0	-37.2	0.14	0.00	-0.74	3.3	-12.7	
6,372.0	10.80	346.30	6,347.0	368.7	-45.0	0.29	-0.22	-1.02	-1.3	-10.5	
6,559.0	10.80	345.00	6,530.6	402.6	-53.7	0.13	0.00	-0.70	-5.5	-7.4	
6,746.0	11.30	343.70	6,714.2	437.1	-63.4	0.30	0.27	-0.70	-10.7	-3.8	
6,933.0	9.90	347.30	6,898.0	470.4	-72.1	0.83	-0.75	1.93	-14.5	0.3	
7,120.0	8.70	348.10	7,082.5	499.9	-78.5	0.65	-0.64	0.43	-13.9	2.5	
7,307.0	6.90	338.50	7,267.8	524.2	-85.5	1.19	-0.96	-5.13	-9.2	4.7	
7,495.0	4.70	3.00	7,454.8	542.4	-89.3	1.74	-1.17	13.03	6.1	6.6	
7,681.0	3.80	350.20	7,640.3	556.1	-89.9	0.70	-0.48	-6.88	18.3	6.7	
7,869.0	3.40	348.00	7,828.0	567.7	-92.1	0.23	-0.21	-1.17	22.0	8.1	
8,055.0	2.90	349.10	8,013.7	577.7	-94.2	0.27	-0.27	0.59	15.7	7.9	
8,242.0	2.70	352.70	8,200.5	586.7	-95.6	0.14	-0.11	1.93	7.0	7.2	
8,430.0	2.20	350.80	8,388.3	594.7	-96.8	0.27	-0.27	-1.01	-1.3	7.3	



PVA Report

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Site:	Condor 32 State	MD Reference:	KB = 25' @ 3341.0usft
Well:	#709H	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)	
8,617.0	0.90	60.70	8,575.2	598.9	-96.1	1.11	-0.70	37.38	3.7	7.1	
8,805.0	0.70	88.00	8,763.2	599.7	-93.6	0.23	-0.11	14.52	4.1	5.3	
8,992.0	0.80	98.30	8,950.2	599.5	-91.2	0.09	0.05	5.51	2.5	4.7	
9,181.0	0.70	100.90	9,139.2	599.1	-88.8	0.06	-0.05	1.38	0.2	4.6	
9,368.0	0.70	75.30	9,326.2	599.2	-86.5	0.17	0.00	-13.69	-3.9	3.8	
9,555.0	0.90	48.30	9,513.1	600.5	-84.3	0.23	0.11	-14.44	-7.7	1.0	
9,745.0	1.40	47.00	9,703.1	603.0	-81.5	0.26	0.26	-0.68	-11.5	0.8	
9,933.0	1.80	108.80	9,891.0	603.7	-77.0	0.89	0.21	32.87	-8.7	12.6	
10,121.0	1.50	145.70	10,079.0	600.7	-72.9	0.58	-0.16	19.63	-4.3	17.1	
10,307.0	0.90	161.80	10,264.9	597.3	-71.0	0.37	-0.32	8.66	-3.2	18.3	
10,495.0	0.40	53.10	10,452.9	596.3	-70.0	0.58	-0.27	-57.82	-16.5	-10.2	
10,683.0	0.40	53.90	10,640.9	597.0	-69.0	0.00	0.00	0.43	-17.9	-10.0	
10,869.0	1.10	329.90	10,826.9	599.0	-69.4	0.61	0.38	-45.16	6.2	-19.5	
11,056.0	1.30	15.50	11,013.9	602.6	-69.7	0.51	0.11	24.39	-13.0	-16.8	
11,245.0	1.80	123.50	11,202.8	603.0	-66.6	1.34	0.26	57.14	-14.3	19.6	
11,432.0	0.80	246.10	11,389.8	600.8	-65.4	1.25	-0.53	65.56	24.5	4.0	
11,620.0	1.20	302.30	11,577.8	601.4	-68.3	0.54	0.21	29.89	14.2	-17.0	
11,808.0	0.60	331.80	11,765.7	603.3	-70.4	0.39	-0.32	15.69	1.3	-20.9	
11,914.0	1.10	357.50	11,871.7	604.8	-70.7	0.58	0.47	24.25	-9.4	-19.1	
12,029.0	1.20	4.00	11,986.7	607.1	-70.7	0.14	0.09	5.65	-13.8	-17.8	
12,122.0	1.10	5.50	12,079.7	609.0	-70.5	0.11	-0.11	1.61	-16.1	-17.4	
12,163.2	2.40	190.78	12,120.8	608.5	-70.6	8.51	3.17	-424.57	17.2	15.8	
Interp @ 12120.6 (#709H OH Plan #1)											
12,163.8	2.46	190.74	12,121.5	608.5	-70.6	8.51	8.50	-5.73	17.2	15.8	
KOP (Condor 32 State #709H)											
12,216.0	6.90	189.70	12,173.5	604.3	-71.4	8.51	8.51	-2.00	15.4	15.6	
12,262.0	15.90	187.50	12,218.5	595.3	-72.7	19.58	19.57	-4.78	12.7	15.2	



PVA Report

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Well:	#709H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
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12,309.0	23.60	186.30	12,262.7	579.5	-74.5	16.40	16.38	-2.55	7.8	14.0	
12,356.0	28.00	186.60	12,305.0	559.2	-76.8	9.37	9.36	0.64	2.8	12.0	
12,403.0	32.20	187.00	12,345.7	535.8	-79.6	8.95	8.94	0.85	-1.1	9.4	
12,450.0	36.40	185.70	12,384.5	509.5	-82.5	9.07	8.94	-2.77	-4.1	6.4	
12,497.0	42.00	183.60	12,420.9	479.9	-84.9	12.24	11.91	-4.47	-6.3	3.8	
12,543.0	48.10	181.70	12,453.4	447.4	-86.4	13.58	13.26	-4.13	-8.5	1.9	
12,590.0	50.70	179.70	12,484.0	411.7	-86.8	6.41	5.53	-4.26	-9.6	0.9	
12,637.0	52.80	178.60	12,513.1	374.8	-86.3	4.83	4.47	-2.34	-7.9	1.0	
12,684.0	59.60	179.20	12,539.2	335.8	-85.5	14.51	14.47	1.28	-5.2	1.5	
12,712.4	62.38	179.45	12,553.0	311.0	-85.2	9.82	9.79	0.87	-3.6	1.6	
HL Crossing, MD:12712.4', TVD:12553.0', N/S:311.0', E/W:-85.2', INC:62.38											
12,731.0	64.20	179.60	12,561.4	294.3	-85.1	9.82	9.79	0.83	-2.4	1.6	
FTP (Condor 32 State #709H)											
12,777.0	68.00	180.80	12,580.0	252.3	-85.2	8.60	8.26	2.61	1.4	1.0	
12,807.0	72.80	182.20	12,590.1	224.1	-86.0	16.59	16.00	4.67	4.0	0.0	
12,837.0	79.20	182.10	12,597.3	195.0	-87.1	21.34	21.33	-0.33	5.6	-1.4	
12,875.0	85.10	181.10	12,602.5	157.4	-88.1	15.74	15.53	-2.63	6.1	-2.8	
12,968.0	86.90	179.50	12,609.0	64.6	-88.6	2.59	1.94	-1.72	10.2	-4.1	
13,061.0	88.40	179.10	12,612.8	-28.3	-87.5	1.67	1.61	-0.43	12.7	-3.8	
13,155.0	89.30	178.51	12,614.7	-122.3	-85.5	1.14	0.96	-0.63	13.3	-2.7	
13,248.0	88.20	178.40	12,616.7	-215.2	-83.0	1.19	-1.18	-0.12	14.1	-1.0	
13,341.0	87.60	177.50	12,620.1	-308.1	-79.7	1.16	-0.65	-0.97	16.3	1.5	
13,380.0	90.10	178.60	12,620.9	-347.0	-78.4	7.00	6.41	2.82	16.5	2.4	
13,433.0	89.80	178.80	12,620.9	-400.0	-77.2	0.68	-0.57	0.38	15.8	3.1	
13,495.0	91.40	177.50	12,620.3	-462.0	-75.2	3.32	2.58	-2.10	14.3	4.6	
13,526.0	92.30	177.90	12,619.3	-493.0	-73.9	3.18	2.90	1.29	12.9	5.5	
13,619.0	91.50	179.50	12,616.2	-585.9	-71.8	1.92	-0.86	1.72	8.6	6.8	



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #709H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3341.0usft
Site:	Condor 32 State	MD Reference:	KB = 25' @ 3341.0usft
Well:	#709H	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)	
13,712.0	90.50	179.70	12,614.6	-678.9	-71.2	1.10	-1.08	0.22	5.7	6.6	
13,774.0	89.50	181.00	12,614.6	-740.9	-71.5	2.65	-1.61	2.10	4.9	5.7	
13,805.0	89.60	180.80	12,614.8	-771.9	-72.0	0.72	0.32	-0.65	4.7	4.9	
13,898.0	88.60	180.90	12,616.3	-864.8	-73.4	1.08	-1.08	0.11	4.9	2.7	
13,991.0	87.90	181.00	12,619.1	-957.8	-74.9	0.76	-0.75	0.11	6.5	0.3	
14,084.0	86.90	180.50	12,623.4	-1,050.7	-76.2	1.20	-1.08	-0.54	9.4	-1.8	
14,177.0	87.90	181.30	12,627.6	-1,143.6	-77.6	1.38	1.08	0.86	12.4	-4.1	
14,271.0	89.80	180.30	12,629.5	-1,237.5	-78.9	2.28	2.02	-1.06	13.0	-6.3	
14,364.0	88.30	180.20	12,631.0	-1,330.5	-79.3	1.62	-1.61	-0.11	13.3	-7.5	
14,458.0	88.80	178.50	12,633.4	-1,424.5	-78.3	1.88	0.53	-1.81	14.4	-7.3	
14,533.3	87.99	177.85	12,635.5	-1,499.7	-75.9	1.38	-1.08	-0.86	15.5	-5.6	
TGT 1 (Condor 32 State #709H)											
14,551.0	87.80	177.70	12,636.1	-1,517.4	-75.2	1.38	-1.08	-0.86	15.9	-5.1	
14,646.0	90.10	178.00	12,637.9	-1,612.3	-71.6	2.44	2.42	0.32	16.5	-2.4	
14,740.0	90.90	178.90	12,637.1	-1,706.2	-69.1	1.28	0.85	0.96	14.6	-0.7	
14,834.0	91.90	180.00	12,634.8	-1,800.2	-68.2	1.58	1.06	1.17	11.2	-0.6	
14,927.0	91.50	179.90	12,632.0	-1,893.2	-68.1	0.44	-0.43	-0.11	7.3	-1.4	
15,021.0	90.50	178.90	12,630.4	-1,987.1	-67.1	1.50	-1.06	-1.06	4.5	-1.3	
15,115.0	89.00	178.00	12,630.8	-2,081.1	-64.6	1.86	-1.60	-0.96	3.8	0.4	
15,208.0	88.00	178.20	12,633.2	-2,174.0	-61.5	1.10	-1.08	0.22	5.1	2.7	
15,301.0	86.60	177.70	12,637.6	-2,266.9	-58.2	1.60	-1.51	-0.54	8.4	5.2	
15,395.0	88.70	179.00	12,641.4	-2,360.7	-55.5	2.63	2.23	1.38	11.1	7.0	
15,488.0	90.10	180.10	12,642.4	-2,453.7	-54.7	1.91	1.51	1.18	11.0	6.9	
15,581.0	90.40	180.00	12,642.0	-2,546.7	-54.8	0.34	0.32	-0.11	9.4	6.0	
15,675.0	91.40	179.30	12,640.5	-2,640.7	-54.2	1.30	1.06	-0.74	6.8	5.7	
15,768.0	90.50	179.70	12,639.0	-2,733.7	-53.4	1.06	-0.97	0.43	4.2	5.7	
15,861.0	89.50	180.50	12,639.0	-2,826.7	-53.6	1.38	-1.08	0.86	3.1	4.7	



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #709H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3341.0usft
Site:	Condor 32 State	MD Reference:	KB = 25' @ 3341.0usft
Well:	#709H	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)	
15,954.0	88.90	180.60	12,640.3	-2,919.7	-54.5	0.65	-0.65	0.11	3.3	2.9	
16,034.2	87.45	181.03	12,642.8	-2,999.9	-55.6	1.89	-1.81	0.53	4.8	1.1	
TGT 2 (Condor 32 State #709H)											
16,048.0	87.20	181.10	12,643.5	-3,013.6	-55.9	1.89	-1.81	0.53	5.3	0.7	
16,141.0	88.40	179.70	12,647.1	-3,106.5	-56.5	1.98	1.29	-1.51	7.9	-0.8	
16,235.0	90.30	179.80	12,648.1	-3,200.5	-56.1	2.02	2.02	0.11	8.0	-1.2	
16,329.0	90.60	179.90	12,647.4	-3,294.5	-55.9	0.34	0.32	0.11	6.2	-1.8	
16,421.0	90.00	178.60	12,646.9	-3,386.5	-54.7	1.56	-0.65	-1.41	4.8	-1.5	
16,515.0	90.50	177.50	12,646.5	-3,480.4	-51.5	1.29	0.53	-1.17	3.4	0.9	
16,609.0	88.10	178.50	12,647.6	-3,574.4	-48.2	2.77	-2.55	1.06	3.5	3.3	
16,702.0	87.80	176.20	12,651.0	-3,667.2	-43.9	2.49	-0.32	-2.47	5.8	6.8	
16,796.0	87.70	176.00	12,654.7	-3,760.9	-37.5	0.24	-0.11	-0.21	8.5	12.3	
16,890.0	88.80	177.10	12,657.5	-3,854.7	-31.9	1.65	1.17	1.17	10.4	17.1	
16,983.0	91.10	177.70	12,657.6	-3,947.6	-27.6	2.56	2.47	0.65	9.5	20.5	
17,076.0	91.40	176.00	12,655.6	-4,040.4	-22.5	1.86	0.32	-1.83	6.5	24.8	
17,170.0	91.90	176.90	12,652.9	-4,134.2	-16.7	1.09	0.53	0.96	2.8	29.7	
17,262.0	87.10	175.50	12,653.7	-4,226.0	-10.6	5.43	-5.22	-1.52	2.5	35.0	
Final MWD Survey (MD= 17262.0')											
17,341.4	87.10	175.50	12,657.7	-4,305.0	-4.4	0.00	0.00	0.00	5.6	40.5	
HL Crossing, MD:17341.4', TVD:12657.7', N/S:-4305.0', E/W:-4.4', INC:87.10											
17,437.6	87.10	175.50	12,662.6	-4,400.8	3.1	0.00	0.00	0.00	9.5	47.2	
PBHL (Condor 32 State #709H)											
17,439.0	87.10	175.50	12,662.6	-4,402.2	3.3	0.00	0.00	0.00	9.5	47.3	
Final Bit Projection (MD= 17439.0')											



PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Condor 32 State
Well: #709H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25' @ 3341.0usft
MD Reference: KB = 25' @ 3341.0usft
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)	
12,712.4	12,553.0	311.0	-85.2	HL Crossing, MD:12712.4', TVD:12553.0', N/S:311.0', E/W:-85.2', INC:62.38
17,262.0	12,653.7	-4,226.0	-10.6	Final MWD Survey (MD= 17262.0')
17,341.4	12,657.7	-4,305.0	-4.4	HL Crossing, MD:17341.4', TVD:12657.7', N/S:-4305.0', E/W:-4.4', INC:87.10
17,439.0	12,662.6	-4,402.2	3.3	Final Bit Projection (MD= 17439.0')

Checked By: _____ Approved By: _____ Date: _____