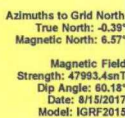


Foghorn 32 State Com #209H

Plan #2



To convert a Magnetic Direction to a Grid Direction, Add 6.57°
 To convert a Magnetic Direction to a True Direction, Add 6.96° East
 To convert a True Direction to a Grid Direction, Subtract 0.39°

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: #209H

KB = 25' @ 3737.0usft 3712.0

Northing	Easting	Latitude	Longitude
493267.00	767179.00	32° 21' 14.188 N	103° 36' 7.090 W

SECTION DETAILS

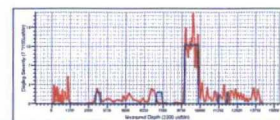
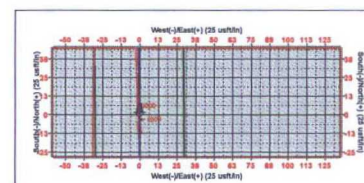
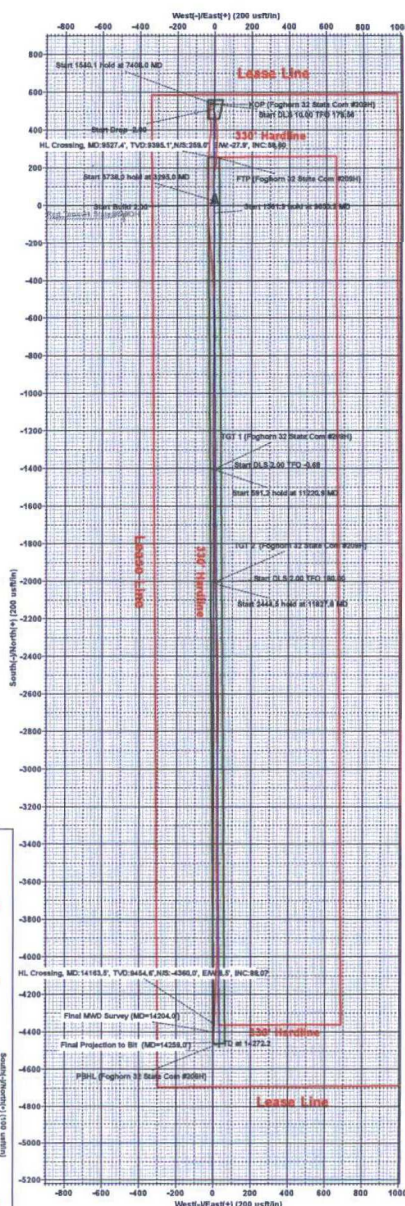
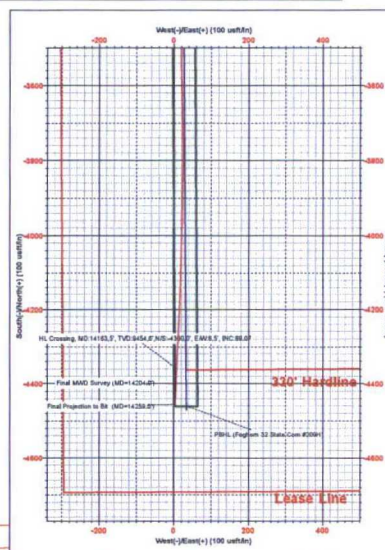
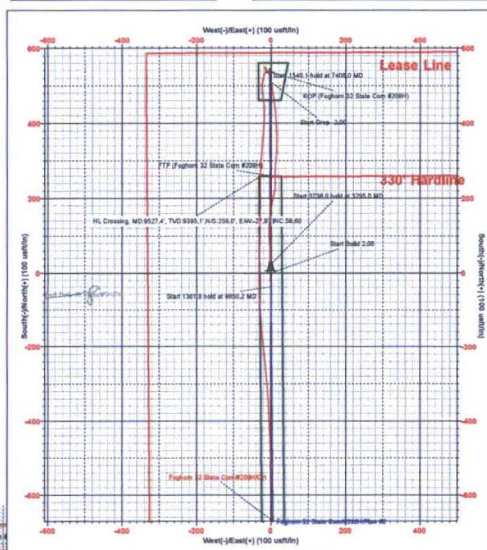
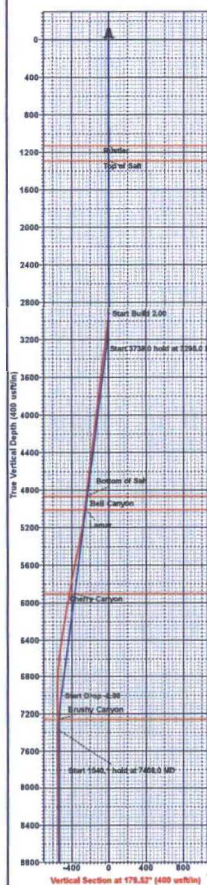
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2920.0	0.00	0.00	2920.0	0.0	0.0	0.00	0.00	0.0	
3	3295.0	7.50	359.52	3293.9	24.5	-0.2	2.00	359.52	-24.5	
4	7033.0	7.50	359.52	7000.0	512.4	-4.3	0.00	0.00	-512.4	
5	7408.0	0.00	0.00	7373.9	536.9	-4.5	2.00	180.00	-536.9	
6	8948.1	0.00	0.00	8914.0	536.9	-4.5	0.00	0.00	-536.9	
7	9850.2	90.21	179.56	9487.0	-38.1	-0.1	10.00	179.56	38.1	
8	11212.1	90.21	179.56	9482.0	-1400.0	10.4	0.00	0.00	1400.0	TGT 1 (Foghorn 32 State Com #209H)
9	11220.9	90.38	179.56	9480.0	-1408.7	10.4	0.00	0.00	1408.8	
10	11212.1	90.38	179.56	9480.0	-1999.9	15.0	0.00	0.00	2000.0	TGT 2 (Foghorn 32 State Com #209H)
11	11827.8	90.07	179.56	9477.9	-2015.6	15.1	2.00	180.00	2015.7	
12	14272.2	90.07	179.56	9475.0	-4460.0	34.0	0.00	0.00	4460.1	PBHL (Foghorn 32 State Com #209H)

CASING DETAILS

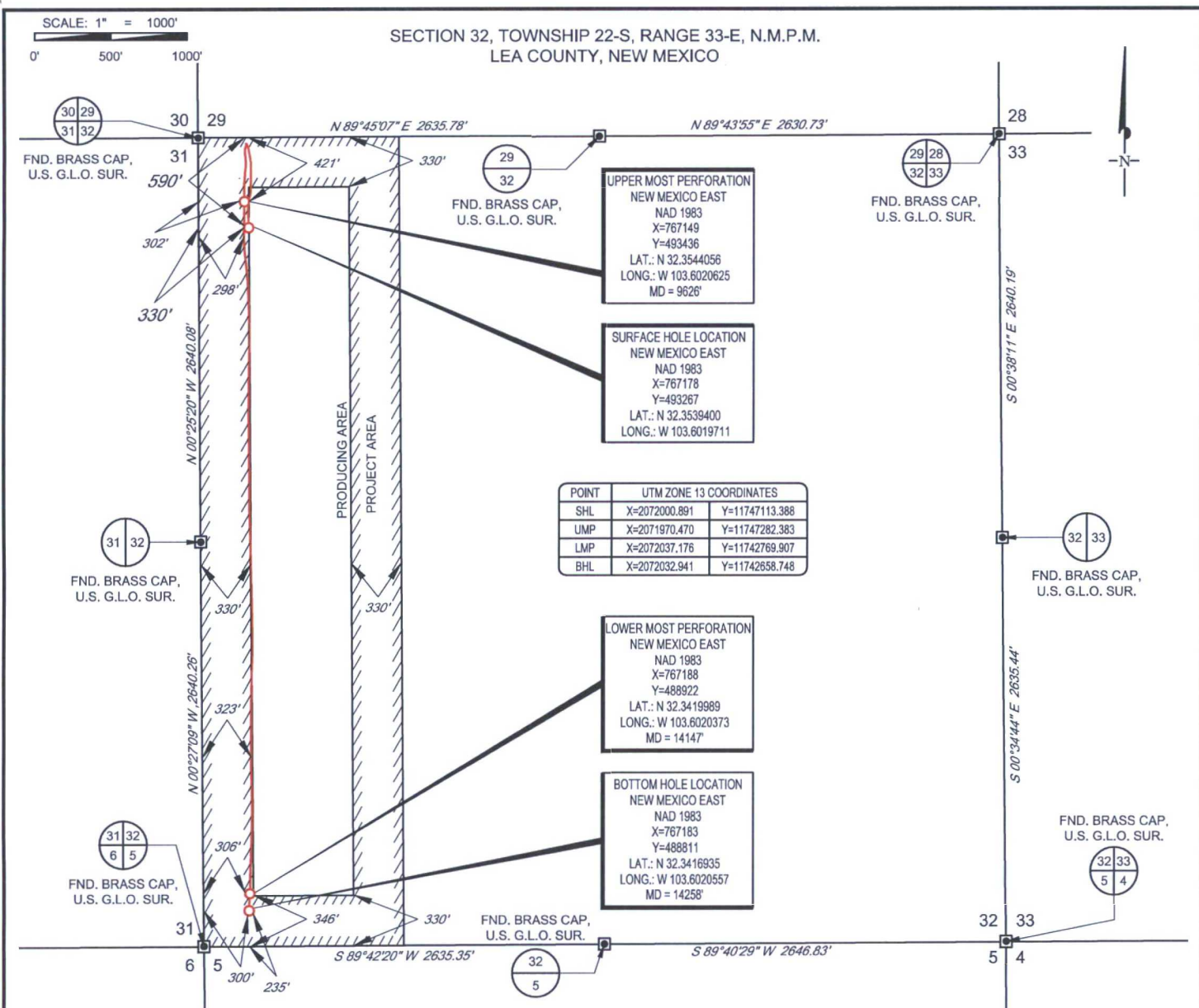
No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP (Foghorn 32 State Com #209H)	8914.0	536.9	-4.5	493803.81	767174.50
PBHL (Foghorn 32 State Com #209H)	9475.0	-4460.0	34.0	488807.00	767213.00
TGT 2 (Foghorn 32 State Com #209H)	9476.0	-1998.9	15.0	491267.10	767194.01
TGT 1 (Foghorn 32 State Com #209H)	9482.0	-1400.0	10.4	491867.00	767189.38
FTP (Foghorn 32 State Com #209H)	9487.0	260.0	-2.0	493527.00	767177.00



Law County, MO (6443-03) NMN
Foghorn 33 State Court
#2200
OH
Plan 87
R/S, September 25, 2017



HOBBS OGD

JAN 24 2018

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LOYALTY INNOVATION LEGACY

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2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM



Michael Blake Brown, P.S. No. 18329
JANUARY 04, 2018

FOGHORN 32 STATE COM #209H AS-COMPLETED	REVISION:
DATE: 01/04/18	
FILE: AD_FOGHORN32STATECOM_209H	
DRAWN BY: MML	
SHEET: 1 OF 1	

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Foghorn 32 State Com

#209H

OH

Design: OH

PVA Report

25 September, 2017

PVA Report

Company:	EOG Resources - Midland			Local Co-ordinate Reference:	Well #209H
Project:	Lea County, NM (NAD 83 NME)			TVD Reference:	KB = 25' @ 3737.0usft
Site:	Foghorn 32 State Com			MD Reference:	KB = 25' @ 3737.0usft
Well:	#209H			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	Foghorn 32 State Com				
Site Position:		Northing:	493,566.00 usft	Latitude:	32° 21' 16.849 N
From:	Map	Easting:	771,543.00 usft	Longitude:	103° 35' 16.193 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	#209H					
Well Position	+N/-S	0.0 usft	Northing:	493,267.00 usft	Latitude:	32° 21' 14.188 N
	+E/-W	0.0 usft	Easting:	767,179.00 usft	Longitude:	103° 36' 7.090 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,712.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/15/2017	6.96	60.18	47,993.40113201

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	179.56	

Survey Program	Date	9/25/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
129.0	14,259.0	QES MWD (OH)	MWD	MWD - Standard

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #209H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3737.0usft
Site:	Foghorn 32 State Com	MD Reference:	KB = 25' @ 3737.0usft
Well:	#209H	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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	
129.0	0.40	301.98	129.0	0.2	-0.4	0.31	0.31	0.00	-0.5	0.0	
156.0	0.50	98.98	156.0	0.3	-0.3	3.27	0.37	581.48	0.4	0.2	
185.0	0.60	199.98	185.0	0.1	-0.3	2.94	0.34	348.28	0.0	-0.3	
217.0	0.90	178.98	217.0	-0.3	-0.3	1.26	0.94	-65.62	-0.3	-0.3	
245.0	0.80	184.98	245.0	-0.7	-0.3	0.48	-0.36	21.43	-0.7	-0.3	
274.0	0.40	232.98	274.0	-1.0	-0.4	2.10	-1.38	165.52	-0.9	0.5	
302.0	0.40	85.98	302.0	-1.0	-0.4	2.74	0.00	-525.00	0.5	-1.0	
334.0	0.10	308.98	334.0	-1.0	-0.3	1.49	-0.94	-428.12	0.4	1.0	
365.0	0.80	136.98	365.0	-1.1	-0.2	2.90	2.26	-554.84	-0.7	-0.9	
396.0	0.90	142.98	396.0	-1.5	0.1	0.43	0.32	19.35	-1.3	-0.8	
428.0	0.10	143.98	428.0	-1.7	0.3	2.50	-2.50	3.12	-1.5	-0.8	
490.0	0.70	123.98	490.0	-2.0	0.6	0.98	0.97	-32.26	-1.6	-1.3	
522.0	0.60	116.98	522.0	-2.2	0.9	0.40	-0.31	-21.87	-1.8	-1.5	
552.0	0.20	108.98	552.0	-2.3	1.1	1.34	-1.33	-26.67	-1.8	-1.8	
584.0	0.70	133.98	584.0	-2.4	1.3	1.64	1.56	78.12	-2.6	-0.8	
616.0	0.50	118.98	616.0	-2.6	1.6	0.79	-0.62	-46.87	-2.6	-1.5	
647.0	0.50	113.98	647.0	-2.7	1.8	0.14	0.00	-16.13	-2.8	-1.8	
679.0	0.40	90.98	679.0	-2.8	2.0	0.64	-0.31	-71.87	-2.1	-2.8	
709.0	0.60	157.98	709.0	-2.9	2.2	1.92	0.67	223.33	-3.5	0.9	
740.0	0.50	242.98	740.0	-3.1	2.1	2.41	-0.32	274.19	0.5	3.8	
771.0	0.50	250.98	771.0	-3.3	1.9	0.23	0.00	25.81	0.7	3.7	
835.0	0.20	126.98	835.0	-3.4	1.7	0.99	-0.47	-193.75	-3.4	-1.7	
866.0	0.40	91.98	866.0	-3.4	1.9	0.85	0.65	-112.90	-2.0	-3.4	
897.0	0.50	357.98	897.0	-3.3	2.0	2.13	0.32	-303.23	3.4	-1.9	
929.0	0.40	89.98	929.0	-3.2	2.1	2.03	-0.31	287.50	-2.1	-3.2	
991.0	0.50	0.98	991.0	-2.9	2.3	1.02	0.16	-143.55	2.9	-2.4	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #209H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3737.0usft
Site:	Foghorn 32 State Com	MD Reference:	KB = 25' @ 3737.0usft
Well:	#209H	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)	
1,053.0	0.60	307.98	1,053.0	-2.4	2.1	0.80	0.16	-85.48	3.1	0.7	
1,085.0	0.50	272.98	1,085.0	-2.3	1.8	1.08	-0.31	-109.37	1.9	2.2	
1,093.0	0.50	316.98	1,093.0	-2.3	1.7	4.68	0.00	550.00	2.9	0.3	
1,190.0	0.10	242.90	1,190.0	-2.0	1.4	0.50	-0.41	-76.37	0.3	2.4	
1,379.0	0.20	257.10	1,379.0	-2.2	0.9	0.06	0.05	7.51	0.4	2.3	
1,568.0	0.00	225.80	1,568.0	-2.2	0.6	0.11	-0.11	0.00	2.2	-0.6	
1,756.0	0.30	350.60	1,756.0	-1.8	0.5	0.16	0.16	0.00	1.8	-0.2	
1,945.0	0.20	338.00	1,945.0	-1.0	0.3	0.06	-0.05	-6.67	1.0	0.1	
2,134.0	0.20	328.30	2,134.0	-0.4	0.0	0.02	0.00	-5.13	0.3	0.2	
2,322.0	0.30	283.50	2,322.0	0.0	-0.7	0.11	0.05	-23.83	-0.6	0.1	
2,511.0	0.30	214.70	2,511.0	-0.3	-1.4	0.18	0.00	-36.40	-1.0	-1.0	
2,700.0	0.10	14.00	2,700.0	-0.5	-1.7	0.21	-0.11	84.29	0.9	1.5	
2,888.0	1.10	8.20	2,887.9	1.4	-1.4	0.53	0.53	-3.09	-1.2	1.6	
3,077.0	6.10	358.90	3,076.5	13.3	-1.3	2.65	2.65	-4.92	-9.0	1.1	
3,266.0	8.30	357.80	3,264.0	36.9	-2.0	1.17	1.16	-0.58	-16.1	1.2	
3,455.0	7.60	359.90	3,451.2	63.1	-2.6	0.40	-0.37	1.11	-17.7	2.2	
3,644.0	6.30	354.10	3,638.8	85.9	-3.7	0.78	-0.69	-3.07	-16.1	1.4	
3,833.0	8.10	358.90	3,826.3	109.5	-5.0	1.00	0.95	2.54	-14.9	3.9	
4,022.0	6.90	5.20	4,013.7	134.1	-4.2	0.77	-0.63	3.33	-14.4	4.5	
4,211.0	7.50	6.30	4,201.2	157.7	-1.8	0.33	0.32	0.58	-13.5	2.1	
4,400.0	6.20	11.90	4,388.8	179.9	1.6	0.77	-0.69	2.96	-11.6	-0.7	
4,589.0	7.50	13.30	4,576.5	201.9	6.6	0.69	0.69	0.74	-10.2	-6.0	
4,778.0	6.90	8.20	4,764.0	225.2	11.0	0.46	-0.32	-2.70	-8.8	-11.7	
4,863.0	7.70	1.00	4,848.3	235.9	11.9	1.43	0.94	-8.47	-7.0	-13.7	
5,044.0	6.60	357.30	5,027.9	258.4	11.6	0.66	-0.61	-2.04	-5.0	-14.0	
5,233.0	10.10	5.20	5,214.9	285.8	12.6	1.94	1.85	4.18	-9.6	-14.1	
5,422.0	12.20	4.30	5,400.3	322.2	15.6	1.11	1.11	-0.48	-21.5	-16.6	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #209H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3737.0usft
Site:	Foghorn 32 State Com	MD Reference:	KB = 25' @ 3737.0usft
Well:	#209H	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)	
5,611.0	11.80	358.20	5,585.2	361.5	16.5	0.70	-0.21	-3.23	-34.4	-20.3	
5,800.0	10.70	356.20	5,770.5	398.3	14.7	0.62	-0.58	-1.06	-46.1	-20.7	
5,989.0	10.30	356.40	5,956.4	432.7	12.5	0.21	-0.21	0.11	-56.1	-19.2	
6,178.0	8.70	349.90	6,142.8	463.6	8.9	1.02	-0.85	-3.44	-60.4	-23.1	
6,367.0	9.40	350.30	6,329.4	492.9	3.8	0.37	0.37	0.21	-66.0	-18.7	
6,556.0	8.70	347.10	6,516.1	522.0	-2.0	0.46	-0.37	-1.69	-70.5	-17.8	
6,745.0	4.90	317.60	6,703.8	541.9	-10.6	2.67	-2.01	-15.61	-54.9	-40.6	
6,933.0	0.70	302.30	6,891.5	548.5	-17.0	2.25	-2.23	-8.14	-37.6	-35.2	
7,122.0	0.30	59.00	7,080.5	549.3	-17.6	0.46	-0.21	61.75	-2.7	30.3	
7,311.0	0.60	66.70	7,269.5	550.0	-16.2	0.16	0.16	4.07	4.9	18.4	
7,500.0	0.30	78.30	7,458.5	550.5	-14.8	0.17	-0.16	6.14	7.4	15.4	
7,689.0	0.50	160.90	7,647.5	549.8	-14.1	0.29	0.11	43.70	15.3	-4.8	
7,878.0	0.70	162.30	7,836.5	547.9	-13.5	0.11	0.11	0.74	13.2	-5.2	
8,067.0	0.80	164.80	8,025.5	545.6	-12.8	0.06	0.05	1.32	10.5	-5.7	
8,255.0	0.50	166.90	8,213.4	543.5	-12.2	0.16	-0.16	1.12	8.2	-6.0	
8,444.0	0.90	216.10	8,402.4	541.5	-12.9	0.36	0.21	26.03	-1.3	-9.5	
8,633.0	1.20	213.10	8,591.4	538.6	-14.9	0.16	0.16	-1.59	-4.2	-9.6	
8,822.0	0.90	201.70	8,780.4	535.6	-16.5	0.19	-0.16	-6.03	-5.7	-10.7	
8,894.0	1.20	210.90	8,852.4	534.4	-17.1	0.48	0.42	12.78	-8.6	-9.5	
8,963.0	4.60	195.40	8,921.3	531.1	-18.2	5.01	4.93	-22.46	-9.2	-11.7	
9,010.0	10.20	194.30	8,967.8	525.3	-19.7	11.92	11.91	-2.34	-12.5	-12.6	
9,057.0	16.30	194.60	9,013.6	514.9	-22.4	12.98	12.98	0.64	-17.1	-14.3	
9,104.0	18.00	180.80	9,058.5	501.2	-24.2	9.36	3.62	-29.36	-16.9	-19.6	
9,152.0	21.40	172.50	9,103.7	485.1	-23.2	9.16	7.08	-17.29	-15.9	-21.0	
9,199.0	25.10	170.90	9,146.9	466.7	-20.5	7.99	7.87	-3.40	-16.3	-18.9	
9,247.0	29.60	174.80	9,189.5	444.9	-17.8	10.09	9.37	8.12	-17.6	-15.3	
9,294.0	32.50	181.10	9,229.8	420.7	-17.0	9.26	6.17	13.40	-17.9	-13.0	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #209H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3737.0usft
Site:	Foghorn 32 State Com	MD Reference:	KB = 25' @ 3737.0usft
Well:	#209H	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)
9,341.0	37.10	184.60	9,268.4	393.9	-18.3	10.67	9.79	7.45	-16.7	-13.8
9,388.0	41.50	185.50	9,304.7	364.3	-21.0	9.44	9.36	1.91	-14.8	-16.7
9,436.0	46.90	184.60	9,339.1	330.9	-23.9	11.33	11.25	-1.87	-12.5	-20.3
9,483.0	51.80	183.20	9,369.7	295.4	-26.3	10.67	10.43	-2.98	-10.3	-23.3
9,527.4	58.60	181.87	9,395.1	259.0	-27.9	15.51	15.32	-2.99	-9.1	-25.4
HL Crossing, MD:9527.4', TVD:9395.1', N/S:259.0', E/W:-27.9', INC:58.60										
9,530.0	59.00	181.80	9,396.4	256.8	-28.0	15.51	15.33	-2.75	-9.1	-25.5
9,577.0	65.50	180.90	9,418.3	215.2	-29.0	13.93	13.83	-1.91	-9.7	-26.8
9,624.0	70.70	180.20	9,435.8	171.6	-29.4	11.15	11.06	-1.49	-11.4	-27.6
9,672.0	73.70	180.10	9,450.5	125.9	-29.5	6.25	6.25	-0.21	-12.6	-28.1
9,719.0	78.40	181.10	9,461.8	80.3	-30.0	10.21	10.00	2.13	-13.1	-28.9
9,766.0	82.80	180.90	9,469.5	34.0	-30.8	9.37	9.36	-0.43	-13.2	-30.1
9,813.0	85.70	180.90	9,474.2	-12.8	-31.5	6.17	6.17	0.00	-12.3	-31.2
9,860.0	91.00	179.20	9,475.5	-59.8	-31.6	11.84	11.28	-3.62	-11.3	-31.6
9,955.0	90.60	173.00	9,474.2	-154.5	-25.1	6.54	-0.42	-6.53	-12.4	-25.9
10,049.0	90.20	173.90	9,473.5	-247.9	-14.4	1.05	-0.43	0.96	-12.7	-15.9
10,143.0	88.70	176.90	9,474.4	-341.5	-6.8	3.57	-1.60	3.19	-11.4	-9.1
10,238.0	89.60	177.80	9,475.9	-436.4	-2.4	1.34	0.95	0.95	-9.6	-5.4
10,332.0	90.00	177.90	9,476.2	-530.4	1.1	0.44	0.43	0.11	-9.0	-2.6
10,426.0	90.70	177.80	9,475.6	-624.3	4.6	0.75	0.74	-0.11	-9.2	0.2
10,521.0	89.40	180.20	9,475.5	-719.3	6.3	2.87	-1.37	2.53	-8.9	1.1
10,615.0	89.80	181.10	9,476.2	-813.3	5.2	1.05	0.43	0.96	-7.9	-0.7
10,710.0	90.90	181.10	9,475.6	-908.2	3.4	1.16	1.16	0.00	-8.2	-3.2
10,804.0	91.40	180.90	9,473.7	-1,002.2	1.7	0.57	0.53	-0.21	-9.7	-5.6
10,898.0	92.00	181.10	9,470.9	-1,096.2	0.1	0.67	0.64	0.21	-12.2	-8.0
10,993.0	90.80	179.40	9,468.6	-1,191.1	-0.3	2.19	-1.26	-1.79	-14.2	-9.1
11,087.0	88.90	179.00	9,468.9	-1,285.1	1.0	2.07	-2.02	-0.43	-13.6	-8.5

PVA Report

Company:	EOG Resources - Midland					Local Co-ordinate Reference:		Well #209H			
Project:	Lea County, NM (NAD 83 NME)					TVD Reference:		KB = 25' @ 3737.0usft			
Site:	Foghorn 32 State Com					MD Reference:		KB = 25' @ 3737.0usft			
Well:	#209H					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)	
11,182.0	88.70	179.40	9,470.8	-1,380.1	2.3	0.47	-0.21	0.42	-11.2	-7.9	
11,276.0	89.40	179.00	9,472.4	-1,474.1	3.6	0.86	0.74	-0.43	-9.1	-7.3	
11,371.0	90.80	179.70	9,472.2	-1,569.0	4.7	1.65	1.47	0.74	-8.6	-7.0	
11,465.0	91.80	179.70	9,470.1	-1,663.0	5.2	1.06	1.06	0.00	-10.1	-7.2	
11,560.0	92.70	179.70	9,466.4	-1,757.9	5.7	0.95	0.95	0.00	-13.2	-7.4	
11,654.0	89.90	178.30	9,464.2	-1,851.9	7.3	3.33	-2.98	-1.49	-14.7	-6.5	
11,749.0	90.00	178.30	9,464.3	-1,946.8	10.2	0.11	0.11	0.00	-14.0	-4.4	
11,843.0	90.90	178.30	9,463.6	-2,040.8	12.9	0.96	0.96	0.00	-14.3	-2.4	
11,938.0	88.80	178.10	9,463.8	-2,135.8	15.9	2.22	-2.21	-0.21	-14.0	-0.1	
12,032.0	88.70	178.30	9,465.9	-2,229.7	18.9	0.24	-0.11	0.21	-11.8	2.1	
12,127.0	90.80	179.00	9,466.3	-2,324.6	21.1	2.33	2.21	0.74	-11.3	3.6	
12,221.0	92.70	179.00	9,463.4	-2,418.6	22.8	2.02	2.02	0.00	-14.0	4.5	
12,316.0	93.60	178.60	9,458.2	-2,513.4	24.7	1.04	0.95	-0.42	-19.1	5.8	
12,410.0	91.30	179.40	9,454.2	-2,607.3	26.4	2.59	-2.45	0.85	-23.0	6.7	
12,505.0	90.60	179.90	9,452.6	-2,702.3	27.0	0.91	-0.74	0.53	-24.5	6.5	
12,599.0	89.40	181.30	9,452.6	-2,796.3	26.0	1.96	-1.28	1.49	-24.4	4.8	
12,693.0	90.20	181.60	9,452.9	-2,890.3	23.6	0.91	0.85	0.32	-23.9	1.7	
12,788.0	88.50	180.90	9,454.0	-2,985.2	21.5	1.94	-1.79	-0.74	-22.7	-1.1	
12,882.0	89.20	180.90	9,455.9	-3,079.2	20.1	0.74	0.74	0.00	-20.8	-3.3	
12,976.0	90.80	180.80	9,455.9	-3,173.2	18.7	1.71	1.70	-0.11	-20.6	-5.4	
13,071.0	91.00	180.40	9,454.4	-3,268.2	17.7	0.47	0.21	-0.42	-22.0	-7.1	
13,166.0	90.60	179.50	9,453.1	-3,363.2	17.7	1.04	-0.42	-0.95	-23.2	-7.8	
13,260.0	90.80	179.20	9,451.9	-3,457.1	18.8	0.38	0.21	-0.32	-24.3	-7.4	
13,355.0	91.60	178.80	9,450.0	-3,552.1	20.5	0.94	0.84	-0.42	-26.1	-6.5	
13,449.0	90.90	178.60	9,447.9	-3,646.1	22.6	0.77	-0.74	-0.21	-28.1	-5.1	
13,543.0	92.30	179.40	9,445.3	-3,740.0	24.2	1.72	1.49	0.85	-30.6	-4.2	
13,638.0	90.00	180.60	9,443.4	-3,835.0	24.2	2.73	-2.42	1.26	-32.4	-4.9	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #209H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3737.0usft
Site:	Foghorn 32 State Com	MD Reference:	KB = 25' @ 3737.0usft
Well:	#209H	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)	
13,732.0	88.90	180.80	9,444.3	-3,929.0	23.1	1.19	-1.17	0.21	-31.4	-6.8	
13,826.0	89.50	181.10	9,445.6	-4,022.9	21.5	0.71	0.64	0.32	-29.9	-9.1	
13,921.0	87.30	182.00	9,448.2	-4,117.9	19.0	2.50	-2.32	0.95	-27.2	-12.4	
14,015.0	88.60	182.50	9,451.6	-4,211.7	15.3	1.48	1.38	0.53	-23.7	-16.8	
14,110.0	88.90	182.70	9,453.7	-4,306.6	11.0	0.38	0.32	0.21	-21.5	-21.8	
14,163.5	89.07	182.59	9,454.6	-4,360.0	8.5	0.38	0.32	-0.21	-20.5	-24.7	
HL Crossing, MD:14163.5', TVD:9454.6', N/S:-4360.0', E/W:8.5', INC:89.07											
14,204.0	89.20	182.50	9,455.2	-4,400.5	6.7	0.38	0.32	-0.21	-19.9	-26.8	
Final MWD Survey (MD=14204.0')											
14,259.0	89.20	182.50	9,456.0	-4,455.4	4.3	0.00	0.00	0.00	-19.0	-29.6	
Final Projection to Bit (MD=14259.0')											

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
9,527.4	9,395.1	259.0	-27.9	HL Crossing, MD:9527.4', TVD:9395.1', N/S:259.0', E/W:-27.9', INC:58.60	
14,163.5	9,454.6	-4,360.0	8.5	HL Crossing, MD:14163.5', TVD:9454.6', N/S:-4360.0', E/W:8.5', INC:89.07	
14,204.0	9,455.2	-4,400.5	6.7	Final MWD Survey (MD=14204.0')	
14,259.0	9,456.0	-4,455.4	4.3	Final Projection to Bit (MD=14259.0')	

Checked By: _____ Approved By: _____ Date: _____