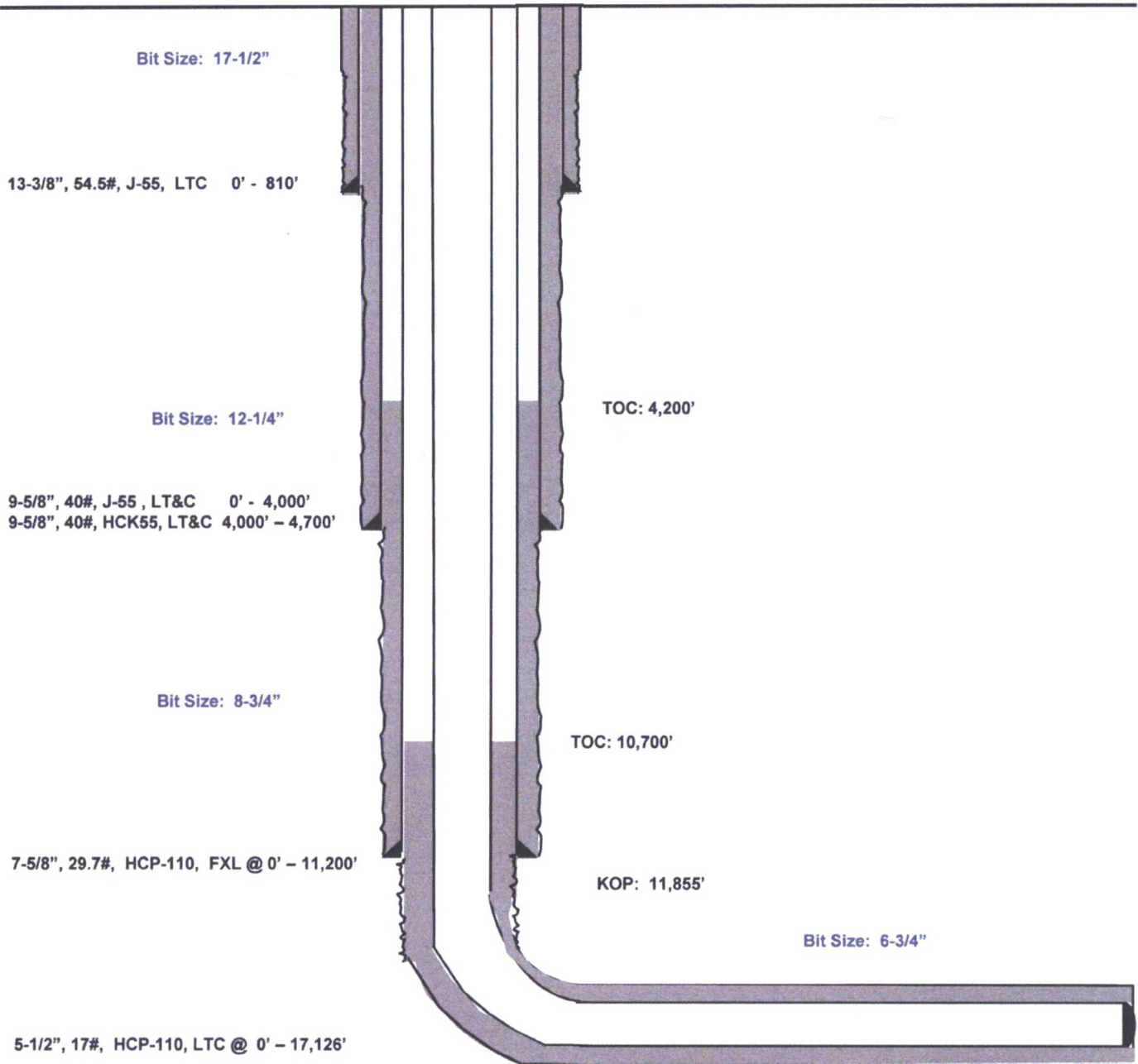


Gem 36 State Com #708H
Lea County, New Mexico

220' FSL
1226' FWL
Section 36
T-25-S, R-32-E

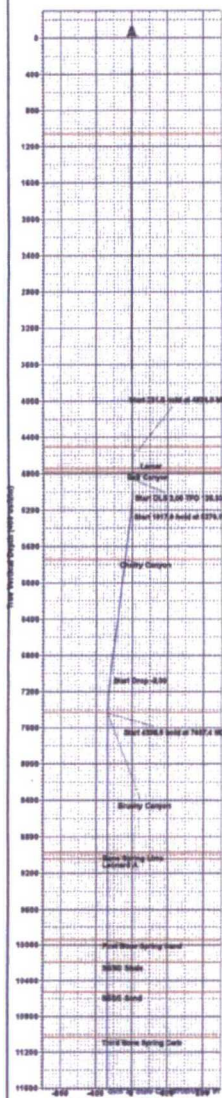
Proposed Wellbore
Revised 3/5/18
API: 30-025-44266

KB: 3,373'
GL: 3,348'



Lateral: 17,126' MD, 12,232' TVD

BH Location: 230' FNL & 1002' FWL
Section 36
T-25-S, R-32-E



Magnetic Field
Strength: 47798.4nT
Dip Angle: 59.91°
Date: 12/6/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.55°
To convert a Magnetic Direction to a True Direction, Add 6.92° E
To convert a True Direction to a Grid Direction, Subtract 0.37°

Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

KB = 25 @ 3373.0usft 3348.0

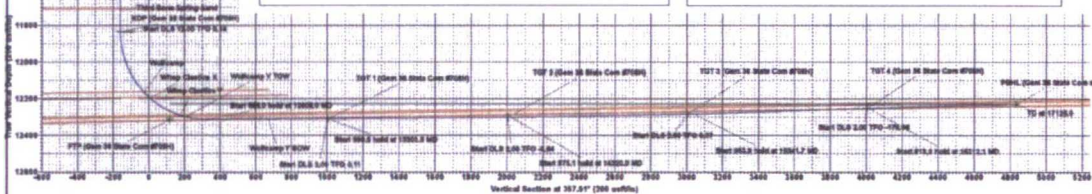
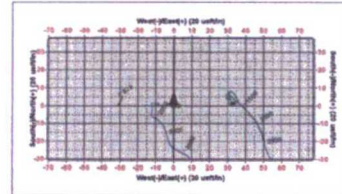
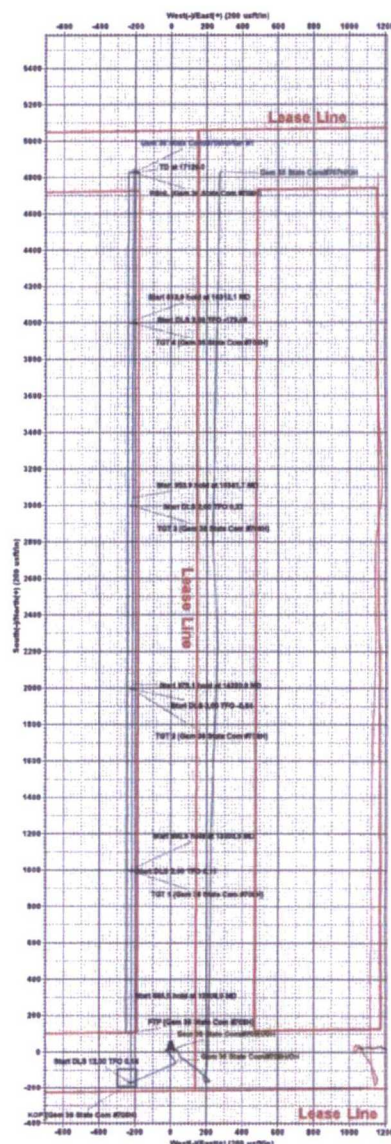
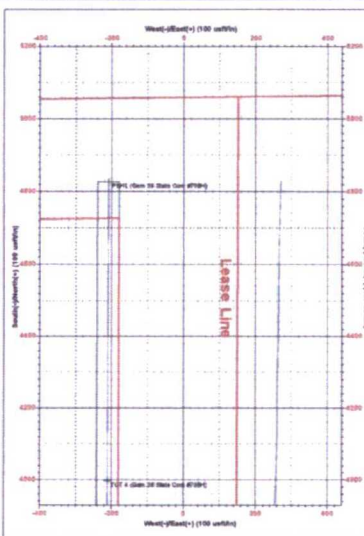
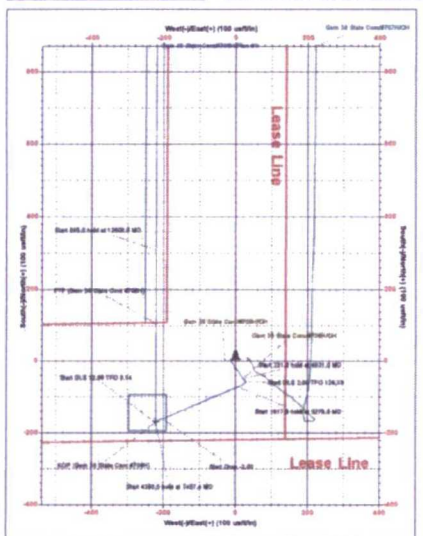
Northing	Easting	Latitude	Longitude
393670.00	758130.00	32° 4' 49.242 N	103° 38' 6.140 W

SECTION DETAILS										
Sec	MO	Inc	Asl	TVD	N-H	+6W	Dwg	TP acc	Target	Annotation
	4693.0	2.38	131.30	4693.0	+53.0	25.2		0.00	V86	
	4692.0	2.30	130.39	4691.0	-56.5	28.7	0.00	0.00	V86	
	4707.9	7.22	346.64	4676.9	-6.6	9.5	0.00	0.00	V86	
	4706.8	7.22	346.64	7080.2	-161.6	-0.14	0.00	0.00	-162.7	
	7467.0	0.00	0.00	7466.0	-170.0	-223.2	0.00	180.00	-160.7	
	11996.9	0.00	0.00	11996.9	-170.0	-222.3	0.00	0.00	-160.7	
	73968.0	90.26	0.14	12316.0	208.0	-221.1	12.00	0.14	318.3	
	13390.0	90.26	0.14	12313.0	90.0	-219.4	0.00	0.00	1002.4	TGT 1 (Gem 36 State Com #7804)
	13390.0	90.26	0.14	12312.9	1004.0	-219.4	0.00	0.11	1013.2	TGT 2 (Gem 36 State Com #7804)
10	13394.0	90.30	0.14	12306.0	999.0	-218.0	0.00	0.00	2002.6	TGT 3 (Gem 36 State Com #7804)
	14230.0	90.30	0.14	12307.7	2021.0	-218.0	0.00	0.00	3442.8	TGT 2 (Gem 36 State Com #7804)
12	16295.1	90.30	0.14	12289.0	2099.0	-216.0	0.00	0.00	3002.6	TGT 3 (Gem 36 State Com #7804)
	16341.7	91.91	0.14	12296.0	2100.0	-217.0	0.00	0.37	3048.9	TGT 3 (Gem 36 State Com #7804)
14	16298.7	91.91	0.14	12286.0	3999.0	-212.0	0.00	0.00	4001.4	TGT 4 (Gem 36 State Com #7804)
	17112.1	91.91	0.14	12298.0	4017.0	-212.0	-170.0	0.00	117.0	
	17712.6	91.91	0.14	12230.0	4020.0	-210.0	0.00	0.00	4030.0	PBH-L (Gem 36 State Com #7804)

CASINO DETAILS

No casing data is available

WELLBORE TARGET DEFS (MAP CO-ORDINATES)					
Name	TVD	40-8	+20-W	Northing	Easting
KOP (Gem 34 State Cor #7081)	12183.8	-176.8	-82.43	30549.88	787907.78
TGT 1 (Gem 34 State Cor #7084)	12131.5	89.4	-219.4	30466.6	787915.8
TGT 2 (Gem 34 State Cor #7084)	12206.0	1996.0	-216.9	30605.65	787913.0
TGT 3 (Gem 34 State Cor #7084)	12214.4	2084.0	-216.8	30606.68	787915.80
TGT 4 (Gem 34 State Cor #7084)	12286.0	2088.0	-212.0	30756.66	787915.80
PMH (Gem 34 State Cor #7084)	12232.0	4828.0	-210.0	30846.66	787926.00
FTP (Gem 34 State Cor #7084)	12215.0	108.0	-221.0	30777.08	787909.00



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Gem 36 State Com

#708H

OH

Plan: Plan #1

Standard Planning Report

05 March, 2018

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #708H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3373.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3373.0usft
Site:	Gem 36 State Com	North Reference:	Grid
Well:	#708H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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		Gem 36 State Com			
Site Position:		Northing:	393,686.00 usft	Latitude:	32° 4' 49.331 N
From:	Map	Easting:	759,213.00 usft	Longitude:	103° 37' 47.552 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37 °

Well	#708H					
Well Position	+N/-S	-16.0 usft	Northing:	393,670.00 usft	Latitude:	32° 4' 49.242 N
	+E/-W	-1,083.0 usft	Easting:	758,130.00 usft	Longitude:	103° 38' 0.140 W
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level:	3,348.0 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/6/2017	6.92	59.91	47,798.35519697

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	4,631.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	357.51

Plan Survey Tool Program	Date	3/5/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	171.0	891.0	Olebrook MWD (OH)	MWD OWSG MWD - Standard
2	961.0	4,631.0	M3P MWD (OH)	MWD OWSG MWD - Standard
3	4,631.0	17,126.0	Plan #1 (OH)	MWD OWSG MWD - Standard

Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Gem 36 State Com
Well: #708H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #708H
TVD Reference: KB = 25 @ 3373.0usft
MD Reference: KB = 25 @ 3373.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
4,631.0	2.30	135.30	4,630.2	-49.0	20.2	0.00	0.00	0.00	0.00	
4,862.0	2.30	135.30	4,861.0	-55.5	26.7	0.00	0.00	0.00	0.00	
5,278.9	7.22	246.84	5,276.8	-71.8	8.5	2.00	1.18	26.76	126.33	
7,096.6	7.22	246.84	7,080.2	-161.6	-201.4	0.00	0.00	0.00	0.00	
7,457.4	0.00	0.00	7,440.0	-170.5	-222.3	2.00	-2.00	0.00	180.00	
11,855.9	0.00	0.00	11,838.5	-170.5	-222.3	0.00	0.00	0.00	0.00	KOP (Gem 36 State C
12,608.0	90.25	0.14	12,316.0	309.0	-221.1	12.00	12.00	0.02	0.14	
13,293.0	90.25	0.14	12,313.0	994.0	-219.4	0.00	0.00	0.00	0.00	TGT 1 (Gem 36 State
13,303.5	90.46	0.14	12,312.9	1,004.6	-219.4	2.00	2.00	0.00	0.11	
14,294.0	90.46	0.14	12,305.0	1,995.0	-216.9	0.00	0.00	0.00	0.00	TGT 2 (Gem 36 State
14,320.0	90.98	0.14	12,304.7	2,021.0	-216.8	2.00	2.00	-0.02	-0.64	
15,295.1	90.98	0.14	12,288.0	2,996.0	-214.5	0.00	0.00	0.00	0.00	TGT 3 (Gem 36 State
15,341.7	91.91	0.14	12,286.8	3,042.6	-214.4	2.00	2.00	0.01	0.37	
16,295.7	91.91	0.14	12,255.0	3,996.0	-212.0	0.00	0.00	0.00	0.00	TGT 4 (Gem 36 State
16,312.1	91.58	0.14	12,254.5	4,012.4	-212.0	2.00	-2.00	-0.03	-179.06	
17,126.0	91.58	0.14	12,232.0	4,826.0	-210.0	0.00	0.00	0.00	0.00	PBHL (Gem 36 State

Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Gem 36 State Com
 Well: #708H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well #708H
 TVD Reference: KB = 25 @ 3373.0usft
 MD Reference: KB = 25 @ 3373.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
171.0	1.06	281.23	171.0	0.3	-1.6	0.4	0.62	0.62	0.00
294.0	1.06	250.73	294.0	0.2	-3.7	0.3	0.45	0.00	-24.80
387.0	0.88	270.95	387.0	-0.1	-5.3	0.1	0.41	-0.19	21.74
482.0	1.14	269.61	481.9	-0.1	-6.9	0.2	0.27	0.27	-1.41
607.0	0.97	332.82	606.9	0.8	-8.7	1.2	0.89	-0.14	50.57
702.0	0.26	84.71	701.9	1.6	-8.8	1.9	1.15	-0.75	117.78
796.0	0.97	204.14	795.9	0.8	-8.9	1.2	1.19	0.76	127.05
891.0	1.06	293.71	890.9	0.5	-10.1	0.9	1.51	0.09	94.28
961.0	0.40	323.20	960.9	0.9	-10.8	1.4	1.06	-0.94	42.13
1,150.0	0.40	285.70	1,149.9	1.6	-11.8	2.1	0.14	0.00	-19.84
1,244.0	0.50	198.60	1,243.9	1.3	-12.3	1.9	0.66	0.11	-92.66
1,338.0	0.70	166.10	1,337.9	0.4	-12.3	0.9	0.41	0.21	-34.57
1,526.0	0.50	184.90	1,525.9	-1.5	-12.1	-1.0	0.15	-0.11	10.00
1,716.0	0.90	183.80	1,715.9	-3.9	-12.2	-3.3	0.21	0.21	-0.58
1,811.0	0.80	200.50	1,810.9	-5.2	-12.5	-4.7	0.28	-0.11	17.58
1,906.0	1.00	120.60	1,905.8	-6.3	-12.0	-5.7	1.23	0.21	-84.11
2,096.0	1.10	121.10	2,095.8	-8.1	-9.1	-7.7	0.05	0.05	0.26
2,285.0	1.40	145.60	2,284.8	-10.9	-6.2	-10.6	0.32	0.16	12.96
2,475.0	0.90	172.10	2,474.7	-14.3	-4.7	-14.1	0.38	-0.26	13.95
2,665.0	0.70	153.00	2,664.7	-16.8	-3.9	-16.6	0.17	-0.11	-10.05
2,855.0	0.90	165.80	2,854.7	-19.3	-3.1	-19.1	0.14	0.11	6.74
3,045.0	0.80	162.00	3,044.7	-22.0	-2.3	-21.9	0.06	-0.05	-2.00
3,235.0	1.30	121.00	3,234.6	-24.4	0.0	-24.3	0.46	0.26	-21.58
3,425.0	1.20	118.30	3,424.6	-26.4	3.6	-26.5	0.06	-0.05	-1.42
3,616.0	1.20	112.30	3,615.6	-28.1	7.2	-28.4	0.07	0.00	-3.14
3,711.0	1.10	157.40	3,710.5	-29.3	8.5	-29.7	0.93	-0.11	47.47
3,901.0	0.70	164.50	3,900.5	-32.1	9.5	-32.5	0.22	-0.21	3.74
4,091.0	1.60	142.30	4,090.5	-35.4	11.4	-35.8	0.52	0.47	-11.68
4,281.0	1.20	168.90	4,280.4	-39.4	13.4	-40.0	0.40	-0.21	14.00
4,471.0	2.20	142.10	4,470.3	-44.2	16.0	-44.9	0.66	0.53	-14.11
4,631.0	2.30	135.30	4,630.2	-49.0	20.2	-49.8	0.18	0.06	-4.25
4,700.0	2.30	135.30	4,699.2	-50.9	22.1	-51.8	0.00	0.00	0.00
4,744.9	2.30	135.30	4,744.0	-52.2	23.4	-53.2	0.00	0.00	0.00
Lamar									
4,785.9	2.30	135.30	4,785.0	-53.4	24.6	-54.4	0.00	0.00	0.00
Bell Canyon									
4,800.0	2.30	135.30	4,799.1	-53.8	24.9	-54.8	0.00	0.00	0.00
4,862.0	2.30	135.30	4,861.0	-55.5	26.7	-56.6	0.00	0.00	0.00
4,900.0	1.95	153.64	4,899.0	-56.7	27.5	-57.8	2.00	-0.92	48.21
5,000.0	2.32	208.69	4,998.9	-60.0	27.3	-61.1	2.00	0.37	55.05
5,100.0	3.87	233.08	5,098.8	-63.8	23.6	-64.7	2.00	1.55	24.39
5,200.0	5.71	242.76	5,198.4	-68.1	16.5	-68.7	2.00	1.84	9.68
5,278.9	7.22	246.84	5,276.8	-71.8	8.5	-72.1	2.00	1.91	5.18
5,300.0	7.22	246.84	5,297.8	-72.9	6.0	-73.0	0.00	0.00	0.00
5,400.0	7.22	246.84	5,397.0	-77.8	-5.5	-77.5	0.00	0.00	0.00
5,500.0	7.22	246.84	5,496.2	-82.7	-17.1	-81.9	0.00	0.00	0.00
5,600.0	7.22	246.84	5,595.4	-87.7	-28.6	-86.3	0.00	0.00	0.00
5,700.0	7.22	246.84	5,694.6	-92.6	-40.2	-90.8	0.00	0.00	0.00
5,753.8	7.22	246.84	5,748.0	-95.3	-46.4	-93.2	0.00	0.00	0.00
Cherry Canyon									
5,800.0	7.22	246.84	5,793.8	-97.5	-51.7	-95.2	0.00	0.00	0.00
5,900.0	7.22	246.84	5,893.0	-102.5	-63.3	-99.6	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #708H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3373.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3373.0usft
Site:	Gem 36 State Com	North Reference:	Grid
Well:	#708H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,000.0	7.22	246.84	5,992.2	-107.4	-74.8	-104.1	0.00	0.00	0.00
6,100.0	7.22	246.84	6,091.4	-112.4	-86.3	-108.5	0.00	0.00	0.00
6,200.0	7.22	246.84	6,190.6	-117.3	-97.9	-112.9	0.00	0.00	0.00
6,300.0	7.22	246.84	6,289.9	-122.2	-109.4	-117.4	0.00	0.00	0.00
6,400.0	7.22	246.84	6,389.1	-127.2	-121.0	-121.8	0.00	0.00	0.00
6,500.0	7.22	246.84	6,488.3	-132.1	-132.5	-126.2	0.00	0.00	0.00
6,600.0	7.22	246.84	6,587.5	-137.1	-144.1	-130.7	0.00	0.00	0.00
6,700.0	7.22	246.84	6,686.7	-142.0	-155.6	-135.1	0.00	0.00	0.00
6,800.0	7.22	246.84	6,785.9	-146.9	-167.2	-139.5	0.00	0.00	0.00
6,900.0	7.22	246.84	6,885.1	-151.9	-178.7	-144.0	0.00	0.00	0.00
7,000.0	7.22	246.84	6,984.3	-156.8	-190.3	-148.4	0.00	0.00	0.00
7,096.6	7.22	246.84	7,080.2	-161.6	-201.4	-152.7	0.00	0.00	0.00
7,100.0	7.15	246.84	7,083.5	-161.8	-201.8	-152.8	2.00	-2.00	0.00
7,200.0	5.15	246.84	7,182.9	-166.0	-211.7	-156.6	2.00	-2.00	0.00
7,300.0	3.15	246.84	7,282.7	-168.8	-218.3	-159.2	2.00	-2.00	0.00
7,400.0	1.15	246.84	7,382.6	-170.3	-221.8	-160.5	2.00	-2.00	0.00
7,454.4	0.06	246.84	7,437.0	-170.5	-222.3	-160.7	2.00	-2.00	0.00
Brushy Canyon									
7,457.4	0.00	0.00	7,440.0	-170.5	-222.3	-160.7	2.00	-2.00	0.00
7,500.0	0.00	0.00	7,482.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
7,600.0	0.00	0.00	7,582.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
7,700.0	0.00	0.00	7,682.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
7,800.0	0.00	0.00	7,782.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
7,900.0	0.00	0.00	7,882.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,000.0	0.00	0.00	7,982.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,100.0	0.00	0.00	8,082.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,200.0	0.00	0.00	8,182.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,300.0	0.00	0.00	8,282.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,400.0	0.00	0.00	8,382.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,500.0	0.00	0.00	8,482.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,600.0	0.00	0.00	8,582.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,700.0	0.00	0.00	8,682.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,800.0	0.00	0.00	8,782.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,900.0	0.00	0.00	8,882.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
8,996.4	0.00	0.00	8,979.0	-170.5	-222.3	-160.7	0.00	0.00	0.00
Bone Spring Lime									
9,000.0	0.00	0.00	8,982.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,070.4	0.00	0.00	9,053.0	-170.5	-222.3	-160.7	0.00	0.00	0.00
Leonard A									
9,100.0	0.00	0.00	9,082.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,200.0	0.00	0.00	9,182.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,300.0	0.00	0.00	9,282.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,400.0	0.00	0.00	9,382.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,500.0	0.00	0.00	9,482.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,600.0	0.00	0.00	9,582.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,700.0	0.00	0.00	9,682.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,800.0	0.00	0.00	9,782.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,900.0	0.00	0.00	9,882.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
9,972.4	0.00	0.00	9,955.0	-170.5	-222.3	-160.7	0.00	0.00	0.00
First Bone Spring Sand									
10,000.0	0.00	0.00	9,982.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,100.0	0.00	0.00	10,082.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,200.0	0.00	0.00	10,182.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,221.4	0.00	0.00	10,204.0	-170.5	-222.3	-160.7	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #708H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3373.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3373.0usft
Site:	Gem 36 State Com	North Reference:	Grid
Well:	#708H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
SBSG Shale									
10,300.0	0.00	0.00	10,282.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,400.0	0.00	0.00	10,382.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,500.0	0.00	0.00	10,482.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,556.4	0.00	0.00	10,539.0	-170.5	-222.3	-160.7	0.00	0.00	0.00
SBSG Sand									
10,600.0	0.00	0.00	10,582.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,700.0	0.00	0.00	10,682.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,800.0	0.00	0.00	10,782.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
10,900.0	0.00	0.00	10,882.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,000.0	0.00	0.00	10,982.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,055.4	0.00	0.00	11,038.0	-170.5	-222.3	-160.7	0.00	0.00	0.00
Third Bone Spring Carb									
11,100.0	0.00	0.00	11,082.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,200.0	0.00	0.00	11,182.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,300.0	0.00	0.00	11,282.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,400.0	0.00	0.00	11,382.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,500.0	0.00	0.00	11,482.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,600.0	0.00	0.00	11,582.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,700.0	0.00	0.00	11,682.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,728.4	0.00	0.00	11,711.0	-170.5	-222.3	-160.7	0.00	0.00	0.00
Third Bone Spring Sand									
11,800.0	0.00	0.00	11,782.6	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,855.9	0.00	0.00	11,838.5	-170.5	-222.3	-160.7	0.00	0.00	0.00
11,875.0	2.29	0.14	11,857.6	-170.1	-222.3	-160.3	12.00	12.00	0.00
11,900.0	5.29	0.14	11,882.5	-168.5	-222.3	-158.7	12.00	12.00	0.00
11,925.0	8.29	0.14	11,907.4	-165.5	-222.3	-155.7	12.00	12.00	0.00
11,950.0	11.29	0.14	11,932.0	-161.3	-222.3	-151.5	12.00	12.00	0.00
11,975.0	14.29	0.14	11,956.4	-155.7	-222.3	-145.9	12.00	12.00	0.00
12,000.0	17.29	0.14	11,980.4	-148.9	-222.2	-139.1	12.00	12.00	0.00
12,025.0	20.29	0.14	12,004.1	-140.9	-222.2	-131.1	12.00	12.00	0.00
12,050.0	23.29	0.14	12,027.3	-131.6	-222.2	-121.8	12.00	12.00	0.00
12,075.0	26.29	0.14	12,050.0	-121.1	-222.2	-111.3	12.00	12.00	0.00
12,100.0	29.29	0.14	12,072.1	-109.5	-222.1	-99.7	12.00	12.00	0.00
12,125.0	32.29	0.14	12,093.6	-96.7	-222.1	-86.9	12.00	12.00	0.00
12,150.0	35.29	0.14	12,114.3	-82.8	-222.1	-73.0	12.00	12.00	0.00
12,175.0	38.29	0.14	12,134.4	-67.8	-222.0	-58.1	12.00	12.00	0.00
12,200.0	41.29	0.14	12,153.6	-51.8	-222.0	-42.1	12.00	12.00	0.00
12,217.8	43.42	0.14	12,166.7	-39.8	-222.0	-30.1	12.00	12.00	0.00
Wolfcamp									
12,225.0	44.29	0.14	12,171.9	-34.8	-222.0	-25.1	12.00	12.00	0.00
12,250.0	47.29	0.14	12,189.3	-16.9	-221.9	-7.2	12.00	12.00	0.00
12,263.1	48.87	0.14	12,198.1	-7.1	-221.9	2.5	12.00	12.00	0.00
Wfmp Clastics X									
12,275.0	50.29	0.14	12,205.8	1.9	-221.9	11.6	12.00	12.00	0.00
12,300.0	53.29	0.14	12,221.3	21.6	-221.8	31.2	12.00	12.00	0.00
12,325.0	56.29	0.14	12,235.7	42.0	-221.8	51.6	12.00	12.00	0.00
12,350.0	59.29	0.14	12,249.0	63.1	-221.7	72.7	12.00	12.00	0.00
12,375.0	62.29	0.14	12,261.2	84.9	-221.7	94.5	12.00	12.00	0.00
12,400.0	65.29	0.14	12,272.3	107.4	-221.6	116.9	12.00	12.00	0.00
12,425.0	68.29	0.14	12,282.1	130.3	-221.6	139.9	12.00	12.00	0.00
12,450.0	71.29	0.14	12,290.7	153.8	-221.5	163.3	12.00	12.00	0.00
12,464.2	72.99	0.14	12,295.1	167.3	-221.5	176.8	12.00	12.00	0.00

Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Gem 38 State Corn
 Well: #708H
 Wellbore: OH
 Design: Plan #1

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

Well #708H
 KB = 25 @ 3373.0usft
 KB = 25 @ 3373.0usft
 Grid
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Wfmp Clastics Y									
12,475.0	74.29	0.14	12,298.1	177.7	-221.4	187.1	12.00	12.00	0.00
12,492.7	76.41	0.14	12,302.6	194.8	-221.4	204.2	12.00	12.00	0.00
Wolfcamp Y TOW									
12,500.0	77.29	0.14	12,304.3	201.9	-221.4	211.3	12.00	12.00	0.00
12,525.0	80.29	0.14	12,309.1	226.4	-221.3	235.8	12.00	12.00	0.00
12,550.0	83.29	0.14	12,312.7	251.2	-221.2	260.6	12.00	12.00	0.00
12,575.0	86.29	0.14	12,315.0	276.1	-221.2	285.4	12.00	12.00	0.00
12,600.0	89.29	0.14	12,315.9	301.0	-221.1	310.4	12.00	12.00	0.00
12,608.0	90.25	0.14	12,316.0	309.0	-221.1	318.3	12.00	12.00	0.00
12,700.0	90.25	0.14	12,315.6	401.0	-220.9	410.3	0.00	0.00	0.00
12,800.0	90.25	0.14	12,315.1	501.0	-220.6	510.2	0.00	0.00	0.00
12,900.0	90.25	0.14	12,314.7	601.0	-220.4	610.1	0.00	0.00	0.00
12,961.7	90.25	0.14	12,314.4	662.8	-220.2	671.7	0.00	0.00	0.00
Wolfcamp Y BOW									
13,000.0	90.25	0.14	12,314.3	701.0	-220.1	710.0	0.00	0.00	0.00
13,100.0	90.25	0.14	12,313.8	801.0	-219.9	809.8	0.00	0.00	0.00
13,114.0	90.25	0.14	12,313.8	815.0	-219.8	823.8	0.00	0.00	0.00
WFMP U1									
13,200.0	90.25	0.14	12,313.4	901.0	-219.6	909.7	0.00	0.00	0.00
13,293.0	90.25	0.14	12,313.0	994.0	-219.4	1,002.6	0.00	0.00	0.00
13,303.5	90.46	0.14	12,312.9	1,004.6	-219.4	1,013.2	2.00	2.00	0.00
13,400.0	90.46	0.14	12,312.2	1,101.0	-219.1	1,109.5	0.00	0.00	0.00
13,500.0	90.46	0.14	12,311.4	1,201.0	-218.9	1,209.4	0.00	0.00	0.00
13,600.0	90.46	0.14	12,310.6	1,301.0	-218.6	1,309.3	0.00	0.00	0.00
13,700.0	90.46	0.14	12,309.8	1,401.0	-218.4	1,409.2	0.00	0.00	0.00
13,800.0	90.46	0.14	12,309.0	1,501.0	-218.1	1,509.1	0.00	0.00	0.00
13,900.0	90.46	0.14	12,308.2	1,601.0	-217.9	1,609.0	0.00	0.00	0.00
14,000.0	90.46	0.14	12,307.4	1,701.0	-217.6	1,708.9	0.00	0.00	0.00
14,100.0	90.46	0.14	12,306.6	1,801.0	-217.4	1,808.8	0.00	0.00	0.00
14,200.0	90.46	0.14	12,305.8	1,901.0	-217.1	1,908.7	0.00	0.00	0.00
14,294.0	90.46	0.14	12,305.0	1,995.0	-216.9	2,002.5	0.00	0.00	0.00
14,300.0	90.58	0.14	12,304.9	2,001.0	-216.9	2,008.5	2.00	2.00	-0.02
14,320.0	90.98	0.14	12,304.7	2,021.0	-216.8	2,028.6	2.00	2.00	-0.02
14,400.0	90.98	0.14	12,303.3	2,101.0	-216.6	2,108.4	0.00	0.00	0.00
14,500.0	90.98	0.14	12,301.6	2,201.0	-216.4	2,208.3	0.00	0.00	0.00
14,600.0	90.98	0.14	12,299.9	2,301.0	-216.2	2,308.2	0.00	0.00	0.00
14,700.0	90.98	0.14	12,298.2	2,400.9	-215.9	2,408.1	0.00	0.00	0.00
14,800.0	90.98	0.14	12,296.5	2,500.9	-215.7	2,507.9	0.00	0.00	0.00
14,900.0	90.98	0.14	12,294.8	2,600.9	-215.4	2,607.8	0.00	0.00	0.00
15,000.0	90.98	0.14	12,293.0	2,700.9	-215.2	2,707.7	0.00	0.00	0.00
15,100.0	90.98	0.14	12,291.3	2,800.9	-215.0	2,807.6	0.00	0.00	0.00
15,200.0	90.98	0.14	12,289.6	2,900.9	-214.7	2,907.5	0.00	0.00	0.00
15,295.1	90.98	0.14	12,288.0	2,996.0	-214.5	3,002.5	0.00	0.00	0.00
15,300.0	91.08	0.14	12,287.9	3,000.9	-214.5	3,007.3	2.00	2.00	0.01
15,341.7	91.91	0.14	12,286.8	3,042.6	-214.4	3,049.0	2.00	2.00	0.01
15,400.0	91.91	0.14	12,284.9	3,100.8	-214.2	3,107.2	0.00	0.00	0.00
15,500.0	91.91	0.14	12,281.5	3,200.8	-214.0	3,207.0	0.00	0.00	0.00
15,600.0	91.91	0.14	12,278.2	3,300.7	-213.7	3,306.9	0.00	0.00	0.00
15,700.0	91.91	0.14	12,274.9	3,400.6	-213.5	3,406.7	0.00	0.00	0.00
15,800.0	91.91	0.14	12,271.5	3,500.6	-213.2	3,506.5	0.00	0.00	0.00
15,900.0	91.91	0.14	12,268.2	3,600.5	-213.0	3,606.4	0.00	0.00	0.00
16,000.0	91.91	0.14	12,264.9	3,700.5	-212.7	3,706.2	0.00	0.00	0.00

Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Gem 36 State Cor
Well: #708H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #708H
TVD Reference: KB = 25 @ 3373.0usft
MD Reference: KB = 25 @ 3373.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,100.0	91.91	0.14	12,261.5	3,800.4	-212.5	3,806.1	0.00	0.00	0.00
16,200.0	91.91	0.14	12,258.2	3,900.4	-212.2	3,905.9	0.00	0.00	0.00
16,295.7	91.91	0.14	12,255.0	3,996.0	-212.0	4,001.4	0.00	0.00	0.00
16,300.0	91.83	0.14	12,254.9	4,000.3	-212.0	4,005.7	2.00	-2.00	-0.03
16,312.1	91.58	0.14	12,254.5	4,012.4	-212.0	4,017.8	2.00	-2.00	-0.03
16,400.0	91.58	0.14	12,252.1	4,100.3	-211.7	4,105.6	0.00	0.00	0.00
16,500.0	91.58	0.14	12,249.3	4,200.2	-211.5	4,205.5	0.00	0.00	0.00
16,600.0	91.58	0.14	12,246.5	4,300.2	-211.3	4,305.3	0.00	0.00	0.00
16,700.0	91.58	0.14	12,243.8	4,400.2	-211.0	4,405.2	0.00	0.00	0.00
16,800.0	91.58	0.14	12,241.0	4,500.1	-210.8	4,505.0	0.00	0.00	0.00
16,900.0	91.58	0.14	12,238.2	4,600.1	-210.5	4,604.9	0.00	0.00	0.00
17,000.0	91.58	0.14	12,235.5	4,700.0	-210.3	4,704.7	0.00	0.00	0.00
17,100.0	91.58	0.14	12,232.7	4,800.0	-210.1	4,804.6	0.00	0.00	0.00
17,126.0	91.58	0.14	12,232.0	4,826.0	-210.0	4,830.6	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP (Gem 36 State Cor - plan hits target center - Polygon	0.00	0.00	11,838.5	-170.5	-222.3	393,499.49	757,907.70	32° 4' 47.569 N	103° 38' 2.737 W
Point 1			11,838.5	-25.0	-75.0	393,474.49	757,832.70		
Point 2			11,838.5	75.0	-75.0	393,574.49	757,832.70		
Point 3			11,838.5	75.0	30.0	393,574.49	757,937.70		
Point 4			11,838.5	-25.0	30.0	393,474.49	757,937.70		
PBHL (Gem 36 State Cor - plan hits target center - Rectangle (sides W60.0 H0.0 D4,718.0)	90.00	0.14	12,232.0	4,826.0	-210.0	398,496.00	757,920.00	32° 5' 37.011 N	103° 38' 2.217 W
TGT 4 (Gem 36 State Cor - plan hits target center - Point	0.00	0.00	12,255.0	3,996.0	-212.0	397,666.00	757,918.00	32° 5' 28.798 N	103° 38' 2.303 W
TGT 3 (Gem 36 State Cor - plan hits target center - Point	0.00	0.00	12,288.0	2,996.0	-214.5	396,666.00	757,915.50	32° 5' 18.903 N	103° 38' 2.408 W
TGT 2 (Gem 36 State Cor - plan hits target center - Point	0.00	0.00	12,305.0	1,995.0	-216.9	395,665.00	757,913.10	32° 5' 8.998 N	103° 38' 2.511 W
TGT 1 (Gem 36 State Cor - plan hits target center - Point	0.00	0.00	12,313.0	994.0	-219.4	394,664.00	757,910.60	32° 4' 59.092 N	103° 38' 2.616 W
FTP (Gem 36 State Cor - plan misses target center by 39.8usft at 12417.8usft MD (12279.4 TVD, 123.7 N, -221.6 E) - Point	0.00	0.00	12,316.0	108.0	-221.0	393,778.00	757,909.00	32° 4' 50.325 N	103° 38' 2.701 W

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #708H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3373.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3373.0usft
Site:	Gem 36 State Com	North Reference:	Grid
Well:	#708H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,066.1	1,066.0	Top of Salt			
4,511.7	4,511.0	Bottom of Salt			
4,744.9	4,744.0	Lamar			
4,785.9	4,785.0	Bell Canyon			
5,753.8	5,748.0	Cherry Canyon			
7,454.4	7,437.0	Brushy Canyon			
8,996.4	8,979.0	Bone Spring Lime			
9,070.4	9,053.0	Leonard A			
9,972.4	9,955.0	First Bone Spring Sand			
10,221.4	10,204.0	SBSG Shale			
10,556.4	10,539.0	SBSG Sand			
11,055.4	11,038.0	Third Bone Spring Carb		0.00	
11,728.4	11,711.0	Third Bone Spring Sand		0.00	
12,217.8	12,166.7	Wolfcamp		-1.00	
12,263.1	12,198.1	Wfmp Clastics X		-1.00	
12,464.2	12,295.1	Wfmp Clastics Y		-1.00	
12,492.7	12,302.6	Wolfcamp Y TOW		-1.00	
13,114.0	12,313.8	WFMP U1		-1.00	
12,961.7	12,314.4	Wolfcamp Y BOW		-1.00	