

S:\SURVEY\FOG MIDLAND\GEM 36 STATE\FINAL PRODUCTS\O GEM 36 STATE COM 707H.DWG 12/5/2017 3:53:06 PM csmith5

Permit Information:

Well Name: Gem 36 State Com No. 707H

OCD - HOBBS
12/06/2017
RECEIVED**Location:**

SL: 220' FSL & 1259' FWL, Section 36, T-25-S, R-32-E, Lea Co., N.M.

BHL: 230' FNL & 1400' FWL, Section 36, T-25-S, R-32-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 810'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,700'	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0 – 11,200'	7.625"	29.7#	HCP110	FXL	1.125	1.25	1.60
6.75"	0'-16,035'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
810'	697	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂ (TOC @ Surface)
	333	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
4,700'	692	12.7	2.22	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	303	14.8	1.32	Tail: Class C + 0.13% C-20
11,200'	375	10.8	3.67	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,200')
	400	14.8	2.38	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
16,035'	950	14.8	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,700')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 810'	Fresh - Gel	8.6-8.8	28-34	N/c
810' – 4,700'	Brine	10.0-10.2	28-34	N/c
4,700' – 11,200'	Oil Base	8.7-9.4	58-68	N/c - 6
11,200' – 16,035' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

Gem 36 State Com #707H
Lea County, New Mexico

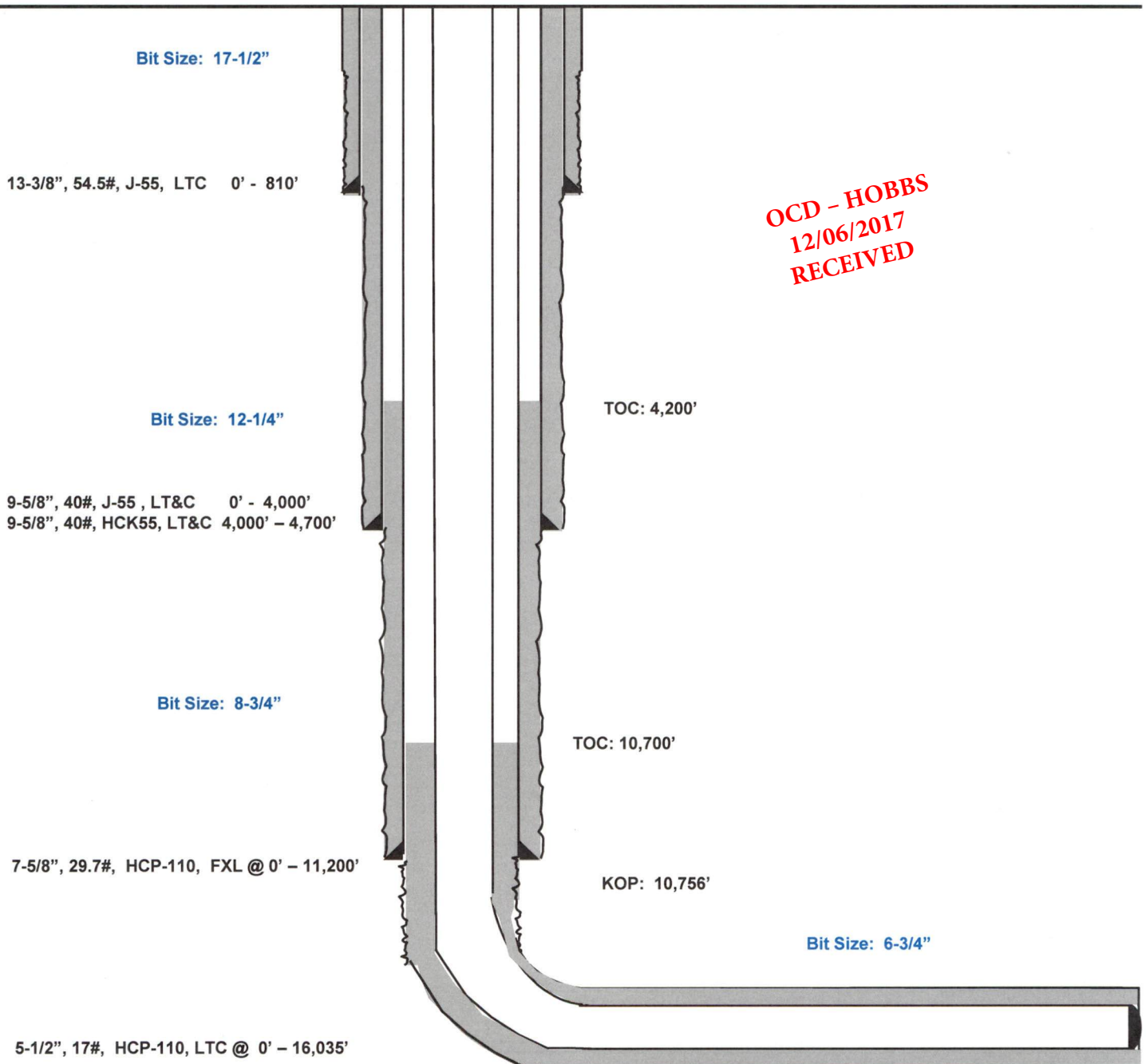
220' FSL
1259' FWL
Section 36
T-25-S, R-32-E

Proposed Wellbore

API: 30-025-*****

KB: 3,374'
GL: 3,349'

OCD - HOBBS
12/06/2017
RECEIVED



Lateral: 16,035' MD, 11,241' TVD

BH Location: 230' FNL & 1400' FWL
Section 36
T-25-S, R-32-E



Lea County, NM (NAD 83 NME)

Gem 36 State Com #707H

Plan #0.1

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: #707H

KB = 25 @ 3374.0usft 3349.0
Northing 85861.00 Easting 758163.00 Latitude 32° 4' 49.250 N Longitude 103° 37' 59.757 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target	Annotation
1	0.0	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.0		
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0		
3	3164.2	1.64	138.74	3164.2	-1.8	1.6	1.00	138.74	-1.7		
4	10756.5	1.64	138.74	10753.4	-165.3	145.0	0.00	0.00	-159.6		
5	11518.8	90.00	0.35	11241.0	312.0	167.2	12.00	-138.38	317.8	PBHL (Gem 36 State Com #707H)	
6	16034.9	90.00	0.35	11241.0	4830.0	185.0	0.00	0.00	4833.5		

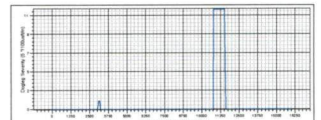
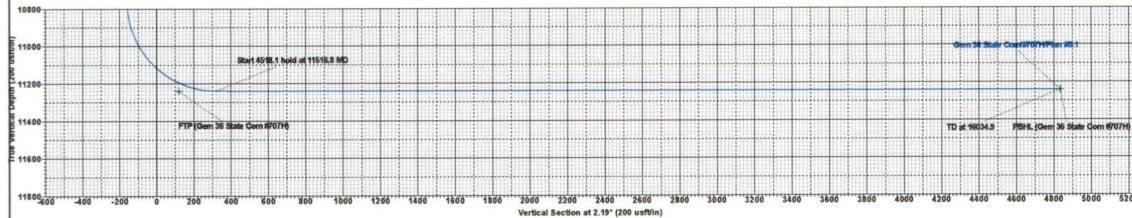
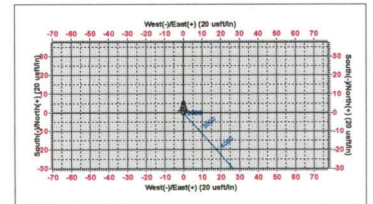
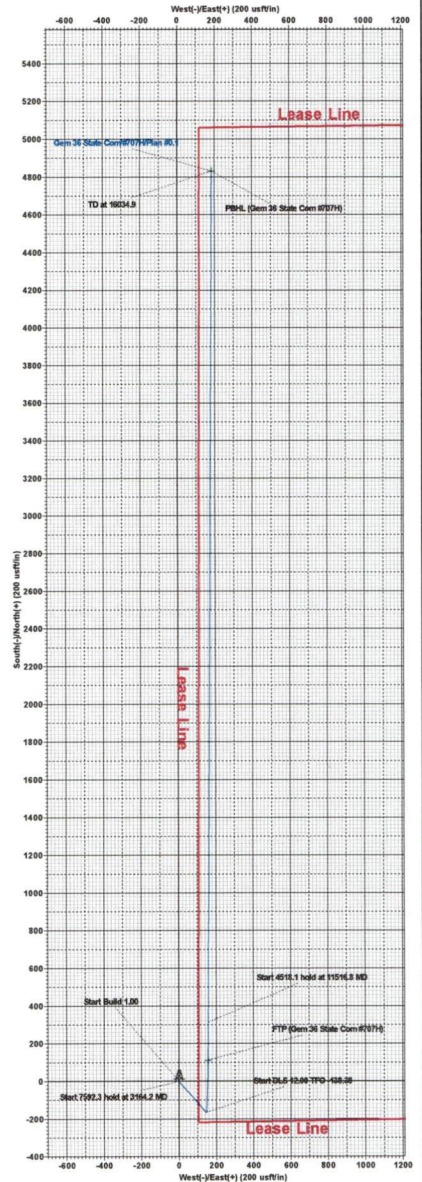
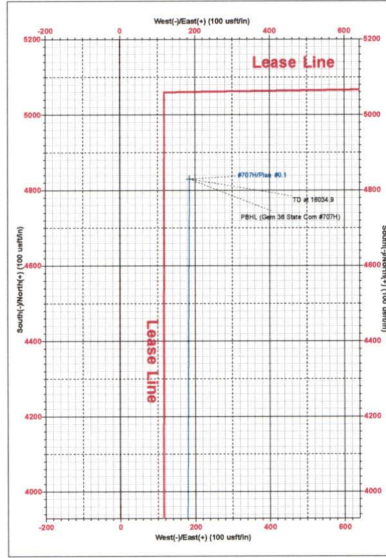
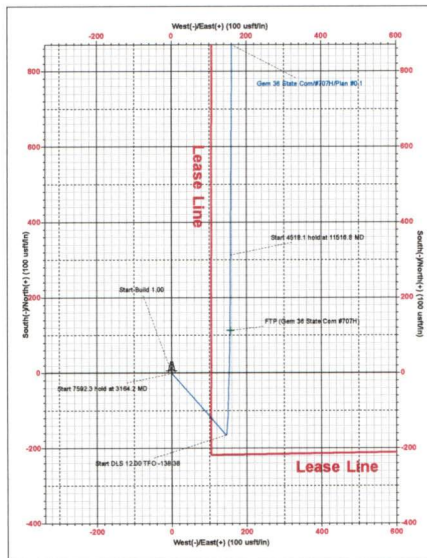
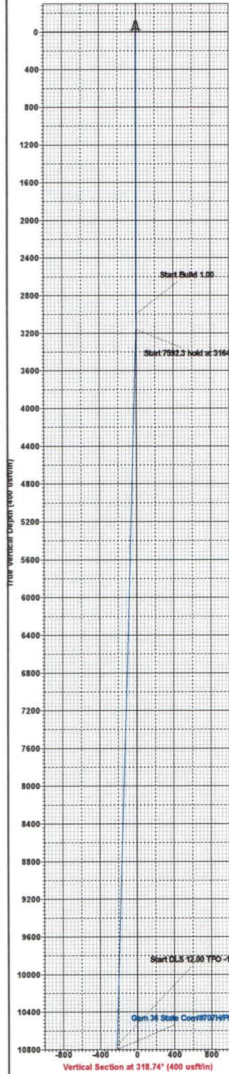
To convert a Magnetic Direction to a Grid Direction, Add 6.55°
To convert a Magnetic Direction to a True Direction, Add 6.92° East
To convert a True Direction to a Grid Direction, Subtract 0.37°

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (Gem 36 State Com #707H)	11241.0	4830.0	185.0	398501.00	758348.00
FTP (Gem 36 State Com #707H)	11241.0	112.0	156.0	393783.00	758319.00



11/14/2017 10:46 AM
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Gem 36 State Com

#707H

OH

Plan: Plan #0.1

Standard Planning Report

06 December, 2017

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Gem 36 State Com
Well: #707H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
TVD Reference: KB = 25 @ 3374.0usft
MD Reference: KB = 25 @ 3374.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project Lea County, NM (NAD 83 NME)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

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 #707H

Well Position +N/-S -15.0 usft Northing: 393,671.00 usft Latitude: 32° 4' 49.250 N
 +E/-W -1,050.0 usft Easting: 758,163.00 usft Longitude: 103° 37' 59.757 W
Position Uncertainty 0.0 usft Wellhead Elevation: Ground Level: 3,349.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/6/2017	6.92	59.91	47,798.36041856

Design Plan #0.1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	2.19

Plan Survey Tool Program Date 12/6/2017

Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	16,034.9 Plan #0.1 (OH)	MWD	
			MWD - Standard	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,164.2	1.64	138.74	3,164.2	-1.8	1.6	1.00	1.00	0.00	138.74	
10,756.5	1.64	138.74	10,753.4	-165.3	145.0	0.00	0.00	0.00	0.00	
11,516.8	90.00	0.35	11,241.0	312.0	157.2	12.00	11.62	-18.20	-138.38	
16,034.9	90.00	0.35	11,241.0	4,830.0	185.0	0.00	0.00	0.00	0.00	PBHL (Gem 36 State)

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Gem 36 State Com
 Well: #707H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
 TVD Reference: KB = 25 @ 3374.0usft
 MD Reference: KB = 25 @ 3374.0usft
 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
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	1.00	138.74	3,100.0	-0.7	0.6	-0.6	1.00	1.00	0.00
3,164.2	1.64	138.74	3,164.2	-1.8	1.6	-1.7	1.00	1.00	0.00
3,200.0	1.64	138.74	3,200.0	-2.5	2.2	-2.5	0.00	0.00	0.00
3,300.0	1.64	138.74	3,299.9	-4.7	4.1	-4.5	0.00	0.00	0.00
3,400.0	1.64	138.74	3,399.9	-6.8	6.0	-6.6	0.00	0.00	0.00
3,500.0	1.64	138.74	3,499.8	-9.0	7.9	-8.7	0.00	0.00	0.00
3,600.0	1.64	138.74	3,599.8	-11.2	9.8	-10.8	0.00	0.00	0.00
3,700.0	1.64	138.74	3,699.8	-13.3	11.7	-12.9	0.00	0.00	0.00
3,800.0	1.64	138.74	3,799.7	-15.5	13.6	-14.9	0.00	0.00	0.00
3,900.0	1.64	138.74	3,899.7	-17.6	15.5	-17.0	0.00	0.00	0.00
4,000.0	1.64	138.74	3,999.6	-19.8	17.3	-19.1	0.00	0.00	0.00
4,100.0	1.64	138.74	4,099.6	-21.9	19.2	-21.2	0.00	0.00	0.00
4,200.0	1.64	138.74	4,199.6	-24.1	21.1	-23.3	0.00	0.00	0.00
4,300.0	1.64	138.74	4,299.5	-26.2	23.0	-25.3	0.00	0.00	0.00
4,400.0	1.64	138.74	4,399.5	-28.4	24.9	-27.4	0.00	0.00	0.00
4,500.0	1.64	138.74	4,499.4	-30.5	26.8	-29.5	0.00	0.00	0.00
4,600.0	1.64	138.74	4,599.4	-32.7	28.7	-31.6	0.00	0.00	0.00
4,700.0	1.64	138.74	4,699.3	-34.8	30.6	-33.7	0.00	0.00	0.00
4,800.0	1.64	138.74	4,799.3	-37.0	32.5	-35.7	0.00	0.00	0.00
4,900.0	1.64	138.74	4,899.3	-39.2	34.4	-37.8	0.00	0.00	0.00
5,000.0	1.64	138.74	4,999.2	-41.3	36.2	-39.9	0.00	0.00	0.00
5,100.0	1.64	138.74	5,099.2	-43.5	38.1	-42.0	0.00	0.00	0.00
5,200.0	1.64	138.74	5,199.1	-45.6	40.0	-44.1	0.00	0.00	0.00

Database: EDM 5000.14
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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)
5,300.0	1.64	138.74	5,299.1	-47.8	41.9	-46.1	0.00	0.00	0.00
5,400.0	1.64	138.74	5,399.1	-49.9	43.8	-48.2	0.00	0.00	0.00
5,500.0	1.64	138.74	5,499.0	-52.1	45.7	-50.3	0.00	0.00	0.00
5,600.0	1.64	138.74	5,599.0	-54.2	47.6	-52.4	0.00	0.00	0.00
5,700.0	1.64	138.74	5,698.9	-56.4	49.5	-54.5	0.00	0.00	0.00
5,800.0	1.64	138.74	5,798.9	-58.5	51.4	-56.5	0.00	0.00	0.00
5,900.0	1.64	138.74	5,898.9	-60.7	53.2	-58.6	0.00	0.00	0.00
6,000.0	1.64	138.74	5,998.8	-62.9	55.1	-60.7	0.00	0.00	0.00
6,100.0	1.64	138.74	6,098.8	-65.0	57.0	-62.8	0.00	0.00	0.00
6,200.0	1.64	138.74	6,198.7	-67.2	58.9	-64.9	0.00	0.00	0.00
6,300.0	1.64	138.74	6,298.7	-69.3	60.8	-66.9	0.00	0.00	0.00
6,400.0	1.64	138.74	6,398.6	-71.5	62.7	-69.0	0.00	0.00	0.00
6,500.0	1.64	138.74	6,498.6	-73.6	64.6	-71.1	0.00	0.00	0.00
6,600.0	1.64	138.74	6,598.6	-75.8	66.5	-73.2	0.00	0.00	0.00
6,700.0	1.64	138.74	6,698.5	-77.9	68.4	-75.3	0.00	0.00	0.00
6,800.0	1.64	138.74	6,798.5	-80.1	70.3	-77.3	0.00	0.00	0.00
6,900.0	1.64	138.74	6,898.4	-82.2	72.1	-79.4	0.00	0.00	0.00
7,000.0	1.64	138.74	6,998.4	-84.4	74.0	-81.5	0.00	0.00	0.00
7,100.0	1.64	138.74	7,098.4	-86.5	75.9	-83.6	0.00	0.00	0.00
7,200.0	1.64	138.74	7,198.3	-88.7	77.8	-85.7	0.00	0.00	0.00
7,300.0	1.64	138.74	7,298.3	-90.9	79.7	-87.7	0.00	0.00	0.00
7,400.0	1.64	138.74	7,398.2	-93.0	81.6	-89.8	0.00	0.00	0.00
7,500.0	1.64	138.74	7,498.2	-95.2	83.5	-91.9	0.00	0.00	0.00
7,600.0	1.64	138.74	7,598.2	-97.3	85.4	-94.0	0.00	0.00	0.00
7,700.0	1.64	138.74	7,698.1	-99.5	87.3	-96.1	0.00	0.00	0.00
7,800.0	1.64	138.74	7,798.1	-101.6	89.1	-98.1	0.00	0.00	0.00
7,900.0	1.64	138.74	7,898.0	-103.8	91.0	-100.2	0.00	0.00	0.00
8,000.0	1.64	138.74	7,998.0	-105.9	92.9	-102.3	0.00	0.00	0.00
8,100.0	1.64	138.74	8,098.0	-108.1	94.8	-104.4	0.00	0.00	0.00
8,200.0	1.64	138.74	8,197.9	-110.2	96.7	-106.5	0.00	0.00	0.00
8,300.0	1.64	138.74	8,297.9	-112.4	98.6	-108.5	0.00	0.00	0.00
8,400.0	1.64	138.74	8,397.8	-114.5	100.5	-110.6	0.00	0.00	0.00
8,500.0	1.64	138.74	8,497.8	-116.7	102.4	-112.7	0.00	0.00	0.00
8,600.0	1.64	138.74	8,597.7	-118.9	104.3	-114.8	0.00	0.00	0.00
8,700.0	1.64	138.74	8,697.7	-121.0	106.2	-116.9	0.00	0.00	0.00
8,800.0	1.64	138.74	8,797.7	-123.2	108.0	-118.9	0.00	0.00	0.00
8,900.0	1.64	138.74	8,897.6	-125.3	109.9	-121.0	0.00	0.00	0.00
9,000.0	1.64	138.74	8,997.6	-127.5	111.8	-123.1	0.00	0.00	0.00
9,100.0	1.64	138.74	9,097.5	-129.6	113.7	-125.2	0.00	0.00	0.00
9,200.0	1.64	138.74	9,197.5	-131.8	115.6	-127.3	0.00	0.00	0.00
9,300.0	1.64	138.74	9,297.5	-133.9	117.5	-129.3	0.00	0.00	0.00
9,400.0	1.64	138.74	9,397.4	-136.1	119.4	-131.4	0.00	0.00	0.00
9,500.0	1.64	138.74	9,497.4	-138.2	121.3	-133.5	0.00	0.00	0.00
9,600.0	1.64	138.74	9,597.3	-140.4	123.2	-135.6	0.00	0.00	0.00
9,700.0	1.64	138.74	9,697.3	-142.5	125.0	-137.7	0.00	0.00	0.00
9,800.0	1.64	138.74	9,797.3	-144.7	126.9	-139.7	0.00	0.00	0.00
9,900.0	1.64	138.74	9,897.2	-146.9	128.8	-141.8	0.00	0.00	0.00
10,000.0	1.64	138.74	9,997.2	-149.0	130.7	-143.9	0.00	0.00	0.00
10,100.0	1.64	138.74	10,097.1	-151.2	132.6	-146.0	0.00	0.00	0.00
10,200.0	1.64	138.74	10,197.1	-153.3	134.5	-148.1	0.00	0.00	0.00
10,300.0	1.64	138.74	10,297.0	-155.5	136.4	-150.1	0.00	0.00	0.00
10,400.0	1.64	138.74	10,397.0	-157.6	138.3	-152.2	0.00	0.00	0.00
10,500.0	1.64	138.74	10,497.0	-159.8	140.2	-154.3	0.00	0.00	0.00
10,600.0	1.64	138.74	10,596.9	-161.9	142.1	-156.4	0.00	0.00	0.00

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Gem 36 State Com
Well: #707H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
TVD Reference: KB = 25 @ 3374.0usft
MD Reference: KB = 25 @ 3374.0usft
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)
10,700.0	1.64	138.74	10,696.9	-164.1	143.9	-158.5	0.00	0.00	0.00
10,756.5	1.64	138.74	10,753.4	-165.3	145.0	-159.6	0.00	0.00	0.00
10,775.0	1.47	48.16	10,771.9	-165.3	145.4	-159.7	12.00	-0.92	-490.53
10,800.0	4.13	15.62	10,796.8	-164.3	145.8	-158.6	12.00	10.65	-130.17
10,825.0	7.07	9.18	10,821.7	-161.9	146.3	-156.2	12.00	11.75	-25.77
10,850.0	10.05	6.52	10,846.4	-158.2	146.8	-152.5	12.00	11.90	-10.63
10,875.0	13.03	5.07	10,870.9	-153.2	147.3	-147.5	12.00	11.94	-5.80
10,900.0	16.02	4.15	10,895.1	-147.0	147.8	-141.2	12.00	11.97	-3.67
10,925.0	19.02	3.52	10,918.9	-139.5	148.3	-133.7	12.00	11.98	-2.54
10,950.0	22.01	3.05	10,942.4	-130.7	148.8	-124.9	12.00	11.98	-1.87
10,975.0	25.01	2.69	10,965.3	-120.7	149.3	-114.9	12.00	11.99	-1.44
11,000.0	28.01	2.40	10,987.7	-109.6	149.8	-103.8	12.00	11.99	-1.15
11,025.0	31.01	2.17	11,009.4	-97.3	150.3	-91.5	12.00	11.99	-0.94
11,050.0	34.00	1.97	11,030.5	-83.9	150.8	-78.0	12.00	11.99	-0.79
11,075.0	37.00	1.80	11,050.8	-69.4	151.3	-63.5	12.00	11.99	-0.68
11,100.0	40.00	1.65	11,070.4	-53.8	151.7	-48.0	12.00	11.99	-0.59
11,125.0	43.00	1.52	11,089.1	-37.3	152.2	-31.4	12.00	12.00	-0.52
11,150.0	46.00	1.41	11,107.0	-19.7	152.6	-13.9	12.00	12.00	-0.47
11,175.0	49.00	1.30	11,123.8	-1.3	153.1	4.5	12.00	12.00	-0.42
11,200.0	52.00	1.20	11,139.7	18.0	153.5	23.8	12.00	12.00	-0.38
11,225.0	55.00	1.12	11,154.6	38.1	153.9	43.9	12.00	12.00	-0.35
11,250.0	57.99	1.03	11,168.4	58.9	154.3	64.8	12.00	12.00	-0.33
11,275.0	60.99	0.96	11,181.1	80.4	154.7	86.3	12.00	12.00	-0.31
11,300.0	63.99	0.88	11,192.6	102.6	155.0	108.5	12.00	12.00	-0.29
11,325.0	66.99	0.82	11,203.0	125.3	155.4	131.2	12.00	12.00	-0.28
11,350.0	69.99	0.75	11,212.2	148.6	155.7	154.4	12.00	12.00	-0.26
11,375.0	72.99	0.69	11,220.1	172.3	156.0	178.1	12.00	12.00	-0.25
11,400.0	75.99	0.62	11,226.8	196.4	156.2	202.2	12.00	12.00	-0.25
11,425.0	78.99	0.56	11,232.2	220.8	156.5	226.6	12.00	12.00	-0.24
11,450.0	81.99	0.51	11,236.3	245.4	156.7	251.3	12.00	12.00	-0.23
11,475.0	84.99	0.45	11,239.2	270.3	156.9	276.1	12.00	12.00	-0.23
11,500.0	87.99	0.39	11,240.7	295.2	157.1	301.0	12.00	12.00	-0.23
11,516.8	90.00	0.35	11,241.0	312.0	157.2	317.8	12.00	12.00	-0.23
11,600.0	90.00	0.35	11,241.0	395.2	157.7	401.0	0.00	0.00	0.00
11,700.0	90.00	0.35	11,241.0	495.2	158.4	500.9	0.00	0.00	0.00
11,800.0	90.00	0.35	11,241.0	595.2	159.0	600.9	0.00	0.00	0.00
11,900.0	90.00	0.35	11,241.0	695.2	159.6	700.8	0.00	0.00	0.00
12,000.0	90.00	0.35	11,241.0	795.2	160.2	800.8	0.00	0.00	0.00
12,100.0	90.00	0.35	11,241.0	895.2	160.8	900.7	0.00	0.00	0.00
12,200.0	90.00	0.35	11,241.0	995.2	161.4	1,000.7	0.00	0.00	0.00
12,300.0	90.00	0.35	11,241.0	1,095.2	162.0	1,100.6	0.00	0.00	0.00
12,400.0	90.00	0.35	11,241.0	1,195.2	162.7	1,200.6	0.00	0.00	0.00
12,500.0	90.00	0.35	11,241.0	1,295.2	163.3	1,300.5	0.00	0.00	0.00
12,600.0	90.00	0.35	11,241.0	1,395.2	163.9	1,400.5	0.00	0.00	0.00
12,700.0	90.00	0.35	11,241.0	1,495.2	164.5	1,500.4	0.00	0.00	0.00
12,800.0	90.00	0.35	11,241.0	1,595.2	165.1	1,600.3	0.00	0.00	0.00
12,900.0	90.00	0.35	11,241.0	1,695.2	165.7	1,700.3	0.00	0.00	0.00
13,000.0	90.00	0.35	11,241.0	1,795.2	166.3	1,800.2	0.00	0.00	0.00
13,100.0	90.00	0.35	11,241.0	1,895.2	167.0	1,900.2	0.00	0.00	0.00
13,200.0	90.00	0.35	11,241.0	1,995.2	167.6	2,000.1	0.00	0.00	0.00
13,300.0	90.00	0.35	11,241.0	2,095.2	168.2	2,100.1	0.00	0.00	0.00
13,400.0	90.00	0.35	11,241.0	2,195.2	168.8	2,200.0	0.00	0.00	0.00
13,500.0	90.00	0.35	11,241.0	2,295.2	169.4	2,300.0	0.00	0.00	0.00
13,600.0	90.00	0.35	11,241.0	2,395.2	170.0	2,399.9	0.00	0.00	0.00

Database: EDM 5000.14
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Local Co-ordinate Reference: Well #707H
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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)
13,700.0	90.00	0.35	11,241.0	2,495.2	170.6	2,499.9	0.00	0.00	0.00
13,800.0	90.00	0.35	11,241.0	2,595.2	171.3	2,599.8	0.00	0.00	0.00
13,900.0	90.00	0.35	11,241.0	2,695.2	171.9	2,699.8	0.00	0.00	0.00
14,000.0	90.00	0.35	11,241.0	2,795.2	172.5	2,799.7	0.00	0.00	0.00
14,100.0	90.00	0.35	11,241.0	2,895.2	173.1	2,899.7	0.00	0.00	0.00
14,200.0	90.00	0.35	11,241.0	2,995.2	173.7	2,999.6	0.00	0.00	0.00
14,300.0	90.00	0.35	11,241.0	3,095.2	174.3	3,099.6	0.00	0.00	0.00
14,400.0	90.00	0.35	11,241.0	3,195.2	175.0	3,199.5	0.00	0.00	0.00
14,500.0	90.00	0.35	11,241.0	3,295.2	175.6	3,299.5	0.00	0.00	0.00
14,600.0	90.00	0.35	11,241.0	3,395.2	176.2	3,399.4	0.00	0.00	0.00
14,700.0	90.00	0.35	11,241.0	3,495.2	176.8	3,499.4	0.00	0.00	0.00
14,800.0	90.00	0.35	11,241.0	3,595.2	177.4	3,599.3	0.00	0.00	0.00
14,900.0	90.00	0.35	11,241.0	3,695.2	178.0	3,699.3	0.00	0.00	0.00
15,000.0	90.00	0.35	11,241.0	3,795.2	178.6	3,799.2	0.00	0.00	0.00
15,100.0	90.00	0.35	11,241.0	3,895.2	179.3	3,899.2	0.00	0.00	0.00
15,200.0	90.00	0.35	11,241.0	3,995.2	179.9	3,999.1	0.00	0.00	0.00
15,300.0	90.00	0.35	11,241.0	4,095.1	180.5	4,099.1	0.00	0.00	0.00
15,400.0	90.00	0.35	11,241.0	4,195.1	181.1	4,199.0	0.00	0.00	0.00
15,500.0	90.00	0.35	11,241.0	4,295.1	181.7	4,299.0	0.00	0.00	0.00
15,600.0	90.00	0.35	11,241.0	4,395.1	182.3	4,398.9	0.00	0.00	0.00
15,700.0	90.00	0.35	11,241.0	4,495.1	182.9	4,498.9	0.00	0.00	0.00
15,800.0	90.00	0.35	11,241.0	4,595.1	183.6	4,598.8	0.00	0.00	0.00
15,900.0	90.00	0.35	11,241.0	4,695.1	184.2	4,698.7	0.00	0.00	0.00
16,000.0	90.00	0.35	11,241.0	4,795.1	184.8	4,798.7	0.00	0.00	0.00
16,034.9	90.00	0.35	11,241.0	4,830.0	185.0	4,833.5	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
PBHL (Gem 36 State Co - plan hits target center - Point	0.00	0.00	11,241.0	4,830.0	185.0	398,501.00	758,348.00	32° 5' 37.033 N	103° 37' 57.242 W
FTP (Gem 36 State Cor - plan misses target center by 40.2usft at 11326.5usft MD (11203.6 TVD, 126.7 N, 155.4 E) - Point	0.00	0.00	11,241.0	112.0	156.0	393,783.00	758,319.00	32° 4' 50.348 N	103° 37' 57.935 W

OCD - HOBBS
12/06/2017
RECEIVED

Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H₂S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:

- Well control equipment
 - a. Flare line 150' from wellhead to be ignited by flare gun.
 - b. Choke manifold with a remotely operated choke.
 - c. Mud/gas separator
- Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

- H₂S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.

(Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
 - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - c. Two wind socks will be placed in strategic locations, visible from all angles.

EOG RESOURCES, INC.
GEM 36 STATE COM #707H

- **Mud program:**
The mud program has been designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.
- **Metallurgy:**
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
- **Communication:**
Communication will be via cell phones and land lines where available.

EOG RESOURCES, INC.
GEM 36 STATE COM #707H

Emergency Assistance Telephone List

PUBLIC SAFETY: **911 or**

Lea County Sheriff's Department	(575) 396-3611
Rod Coffman	
Fire Department:	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals:	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
New Mexico Oil Conservation	(575) 476-3440
U.S. Dept. of Labor	(575) 887-1174

EOG Resources, Inc.

EOG / Midland	Office (432) 686-3600
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Company Drilling Consultants:

David Dominique	Cell (985) 518-5839
Mike Vann	Cell (817) 980-5507

Drilling Engineer

Steve Munsell	Office (432) 686-3609
	Cell (432) 894-1256

Drilling Manager

Floyd Hernandez	Office (432) 686-3716
	Cell (817) 682-4569

Drilling Superintendent

Jason Fitzgerald	Office (432) 848-9029
	Cell (318) 347-3916

H&P Drilling

H&P Drilling	Office (432) 563-5757
H&P 651 Drilling Rig	Rig (903) 509-7131

Tool Pusher:

Johnathan Craig	Cell (817) 760-6374
Brad Garrett	

Safety

Brian Chandler (HSE Manager)	Office (432) 686-3695
	Cell (817) 239-0251