

Permit Information:

HOBBS OCD

Well Name: Gem 36 State Com No. 2H

MAY 05 2014

Location:

SL: 220' FSL & 662' FEL, Section 36, T-25-S, R-32-E, Lea Co., N.M.

RECEIVED

BHL: 230' FNL & 880' FEL, 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 - 770'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-3700'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	3700' - 4700'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-13,881'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Slurry Description
770'	300	13.5	1.73	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
4,700'	700	12.7	2.22	Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
13,881'	375	10.8	3.67	60:40:0 Class C + 15.0 pps BA-90 + 4% MPA-5 + 3.0% SMS + 5.0% A-10 + 1.0% BA-10A + 0.80% ASA-301 + 2.55% R-21 + 8.0 pps LCM-1
	400	11.8	2.38	50:50:10 Class H + 0.80% FL-52 + 0.30% ASA-301 + 0.40% SMS + 2.0% Salt + 0.30% R-21 + 3.0 pps LCM-1 + 0.25 pps Celloflake
	1300	14.2	1.28	50:50:2 Class H + 0.65% FL-52 + 0.45% CD-32 + 0.10% SMS + 2.0% Salt

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 770'	Fresh - Gel	8.6-8.8	28-34	N/c
770' - 4,700'	Brine	10.0-10.2	28-34	N/c
4,700' - 8,752'	Cut Brine	8.4-9.0	28-34	N/c
KOP - 13,881' Lateral	Cut Brine	9.0-9.5	40-42	8-10

MAY 07 2014

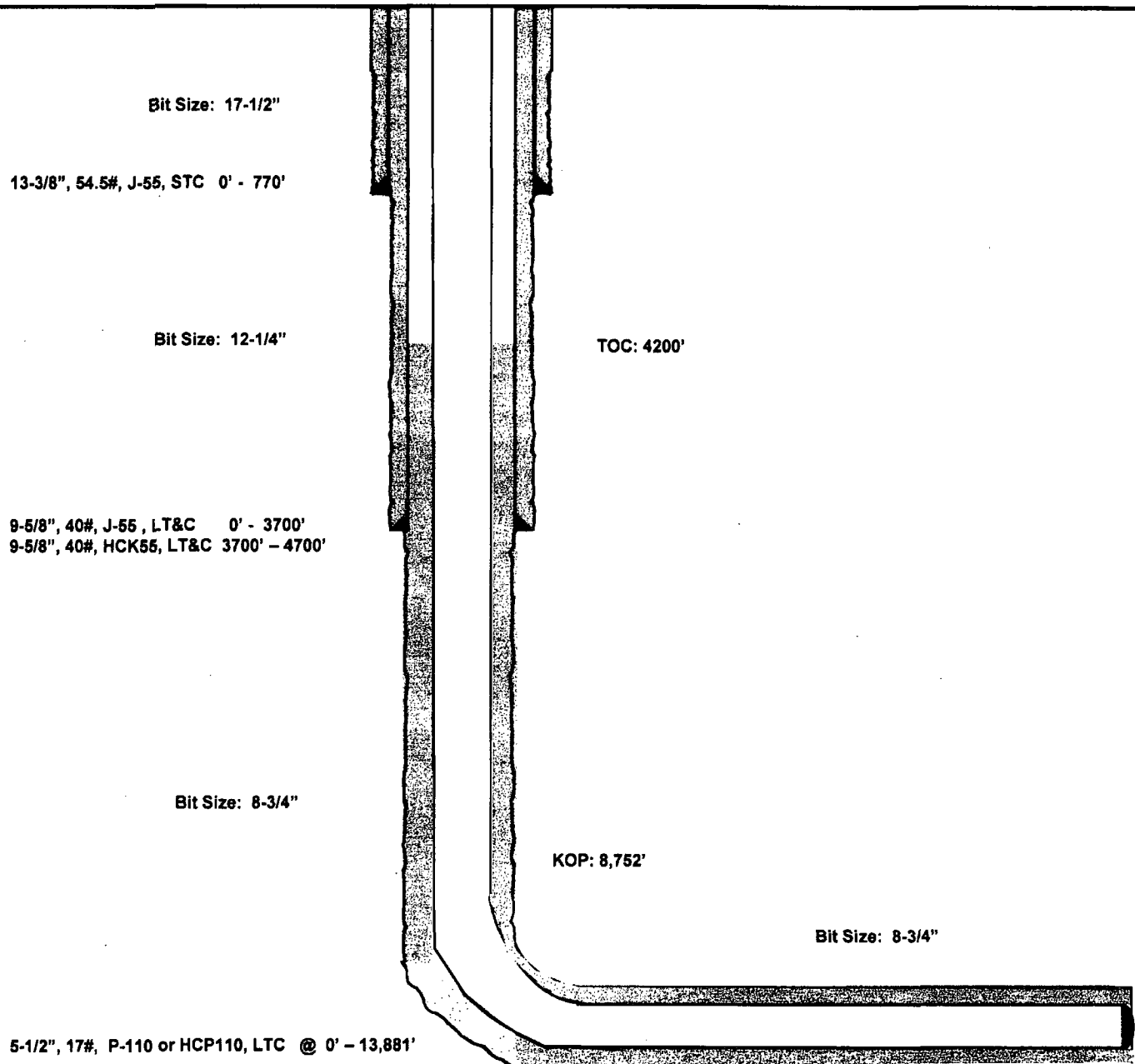
Gem 36 State Com #2H
Red Hills
Lea County, New Mexico

220' FSL
662' FEL
Section 36
T-25-S, R-32-E

Proposed Wellbore

API: 30-025-

KB: 3,406'
GL: 3,376'



Lateral: 13,881' MD, 9,230' TVD

BH Location: 230' FNL & 880' FEL
Section 36
T-25-S, R-32-E



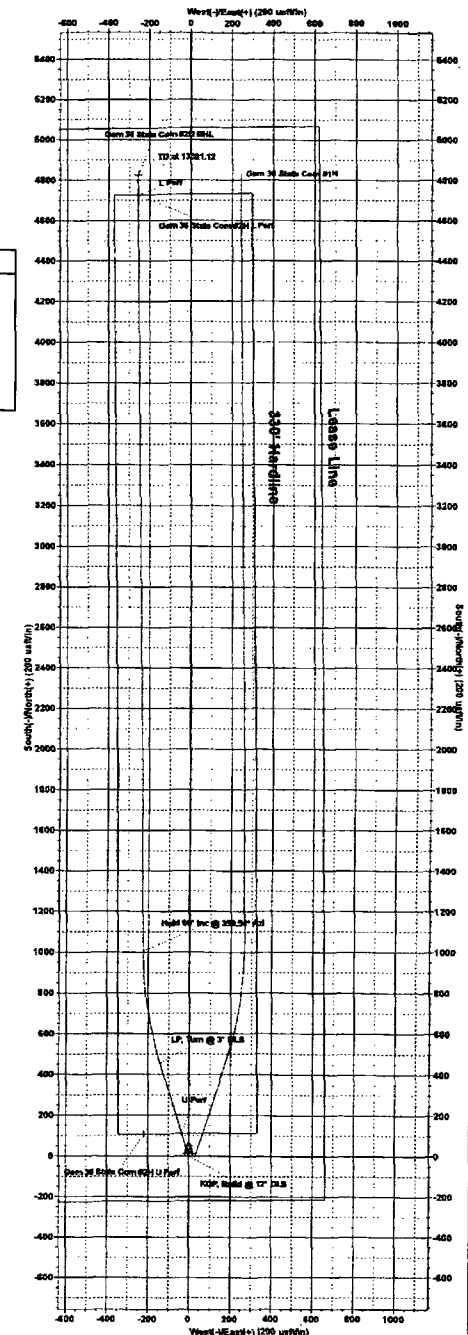
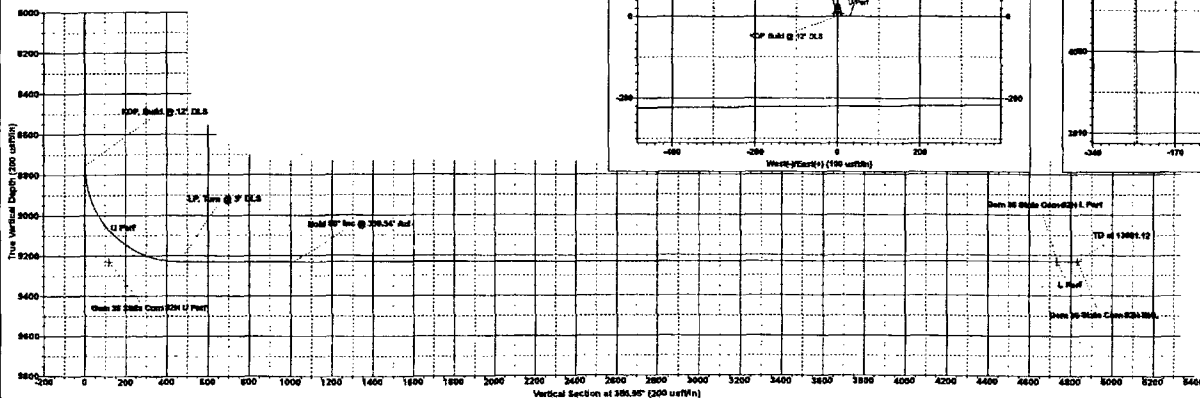
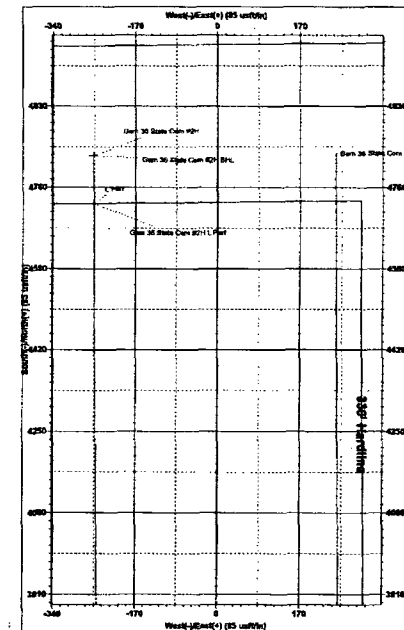
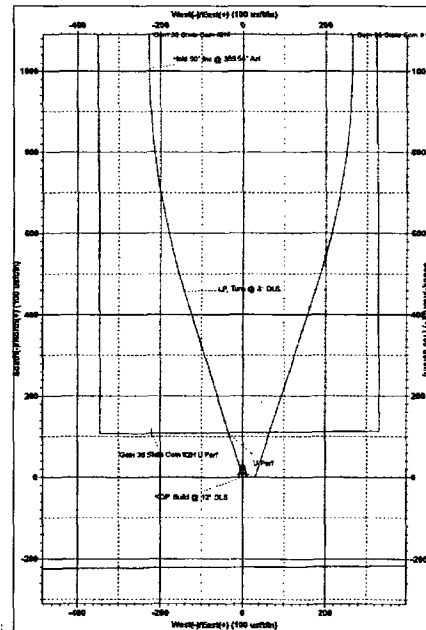
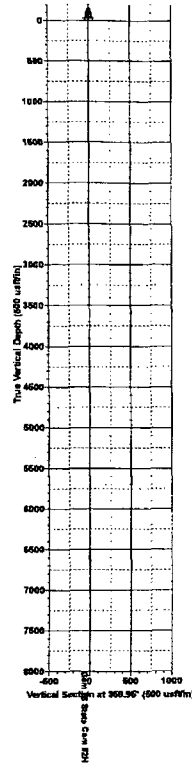
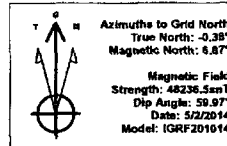
Lea County, NM
Gem 36 State Com #2H
3376' GL +30' KB
Plan #1

PROJECT DETAILS: Lea County, NM
 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: Gem 36 State Com #2H
 Ground Level: 3376.00
 Northing: 393654.00 Easting: 720458.00 Latitude: 32° 4' 48.976 N Longitude: 103° 37' 17.616 W

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSecd	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8762.54	0.00	0.00	8762.54	0.00	0.00	0.00	0.00	0.00	
3	8902.54	90.00	342.80	9236.00	436.11	-141.19	12.00	342.80	463.97	KOP, Build @ 12" DLS
4	10066.55	90.00	359.54	9236.00	10066.55	-226.54	3.00	90.00	1016.27	LP, Turn @ 3" DLS
5	13881.12	90.00	359.54	9236.00	4826.00	-257.00	0.00	0.00	4832.54	Hold 90° Inc @ 359.54° Azi TD at 13881.12

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Gem 36 State Com #2H BHL	9236.00	4826.00	-257.00	396490.00	720199.00	Point
Gem 36 State Com #2H L Part	9236.00	4726.00	-257.00	396390.00	720199.00	Point
Gem 36 State Com #2H U Part	9236.00	108.00	-220.00	393762.00	720236.00	Point





EOG Resources - Midland

Lea County, NM

Gem 36 State Com

Gem 36 State Com #2H

OH

Plan: Plan #1

Standard Survey Report

02 May, 2014



EOG Resources, Inc.

Survey Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well Gem 36 State Com #2H
Project:	Lea County, NM	TVD Reference:	WELL @ 3406.00usft (3376' GL +30' KB)
Site:	Gem 36 State Com	MD Reference:	WELL @ 3406.00usft (3376' GL +30' KB)
Well:	Gem 36 State Com #2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Project	Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Gem 36 State Com		
Site Position:		Northing:	393,654.00 usft
From:	Map	Easting:	720,486.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 4' 48.974 N
		Longitude:	103° 37' 17.267 W
		Grid Convergence:	0.38 °

Well	Gem 36 State Com #2H		
Well Position	+N/-S	0.00 usft	Northing: 393,654.00 usft
	+E/-W	0.00 usft	Easting: 720,456.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 4' 48.976 N
		Longitude:	103° 37' 17.616 W
		Ground Level:	3,376.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF201014	5/2/2014	7.24
		Dip Angle (°)	59.97
		Field Strength (nT)	48,237

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
		Direction (°)	356.95

Survey Tool Program	Date 5/2/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
0.00	13,881.12	Plan #1 (OH)	MWD
			Description
			MWD - Standard

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00



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Wellbore: OH
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Database: EDM 5000.1 Single User Db

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)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM
Site: Gem 36 State Com
Well: Gem 36 State Com #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Gem 36 State Com #2H
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MD Reference: WELL @ 3406.00usft (3378' GL +30' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,752.54	0.00	0.00	8,752.54	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Build @ 12° DLS									
8,775.00	2.70	342.80	8,774.99	0.50	-0.16	0.51	12.00	12.00	0.00
8,800.00	5.70	342.80	8,799.92	2.25	-0.70	2.29	12.00	12.00	0.00
8,825.00	8.70	342.80	8,824.72	5.24	-1.62	5.32	12.00	12.00	0.00
8,850.00	11.70	342.80	8,849.32	9.47	-2.93	9.61	12.00	12.00	0.00
8,875.00	14.70	342.80	8,873.66	14.92	-4.62	15.14	12.00	12.00	0.00
8,900.00	17.70	342.80	8,897.67	21.58	-6.68	21.90	12.00	12.00	0.00
8,925.00	20.70	342.80	8,921.27	29.43	-9.11	29.87	12.00	12.00	0.00



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Survey Report

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Database: EDM 5000.1 Single User Db

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)
8,950.00	23.70	342.80	8,944.42	38.45	-11.90	39.03	12.00	12.00	0.00
8,975.00	26.70	342.80	8,967.04	48.82	-15.05	48.35	12.00	12.00	0.00
9,000.00	29.70	342.80	8,989.07	59.90	-18.54	60.80	12.00	12.00	0.00
9,025.00	32.70	342.80	9,010.45	72.27	-22.37	73.36	12.00	12.00	0.00
9,050.00	35.70	342.80	9,031.13	85.69	-26.53	86.98	12.00	12.00	0.00
9,075.00	38.70	342.80	9,051.04	100.12	-30.99	101.63	12.00	12.00	0.00
9,087.97	40.25	342.80	9,061.05	108.00	-33.43	109.63	12.00	12.00	0.00
U Perf									
9,100.00	41.70	342.80	9,070.13	115.54	-35.76	117.27	12.00	12.00	0.00
9,125.00	44.70	342.80	9,088.36	131.88	-40.82	133.87	12.00	12.00	0.00
9,150.00	47.70	342.80	9,105.66	149.11	-46.16	151.36	12.00	12.00	0.00
9,175.00	50.70	342.80	9,122.00	167.19	-51.75	169.71	12.00	12.00	0.00
9,200.00	53.70	342.80	9,137.32	186.06	-57.59	188.86	12.00	12.00	0.00
9,225.00	56.70	342.80	9,151.59	205.66	-63.66	208.76	12.00	12.00	0.00
9,250.00	59.70	342.80	9,164.76	225.96	-69.95	229.36	12.00	12.00	0.00
9,275.00	62.70	342.80	9,176.81	246.88	-76.42	250.60	12.00	12.00	0.00
9,300.00	65.70	342.80	9,187.69	268.38	-83.08	272.42	12.00	12.00	0.00
9,325.00	68.70	342.80	9,197.38	290.39	-89.89	294.76	12.00	12.00	0.00
9,350.00	71.70	342.80	9,205.84	312.86	-96.85	317.57	12.00	12.00	0.00
9,375.00	74.70	342.80	9,213.07	335.72	-103.92	340.77	12.00	12.00	0.00
9,400.00	77.70	342.80	9,219.04	358.91	-111.10	364.31	12.00	12.00	0.00
9,425.00	80.70	342.80	9,223.72	382.36	-118.36	388.12	12.00	12.00	0.00
9,450.00	83.70	342.80	9,227.12	406.02	-125.89	412.13	12.00	12.00	0.00
9,475.00	86.70	342.80	9,229.21	429.82	-133.05	436.29	12.00	12.00	0.00
9,500.00	89.70	342.80	9,230.00	453.69	-140.44	460.51	12.00	12.00	0.00
9,502.54	90.00	342.80	9,230.01	456.11	-141.19	462.97	12.00	12.00	0.00
LP, Turn @ 3° DLS									
9,600.00	90.00	345.72	9,230.01	549.91	-167.62	558.04	3.00	0.00	3.00
9,700.00	90.00	348.72	9,230.00	647.42	-189.73	656.59	3.00	0.00	3.00
9,800.00	90.00	351.72	9,230.00	745.96	-208.71	755.89	3.00	0.00	3.00
9,900.00	90.00	354.72	9,230.00	845.25	-218.51	855.67	3.00	0.00	3.00
10,000.00	90.00	357.72	9,230.00	945.02	-225.10	955.65	3.00	0.00	3.00
10,060.65	90.00	359.54	9,230.00	1,005.65	-226.54	1,016.27	3.00	0.00	3.00
Hold 90° Inc @ 359.54° Azi									
10,100.00	90.00	359.54	9,230.00	1,045.00	-226.86	1,055.58	0.00	0.00	0.00
10,200.00	90.00	359.54	9,230.00	1,145.00	-227.65	1,155.48	0.00	0.00	0.00
10,300.00	90.00	359.54	9,230.00	1,244.99	-228.45	1,255.38	0.00	0.00	0.00
10,400.00	90.00	359.54	9,230.00	1,344.99	-229.25	1,355.28	0.00	0.00	0.00
10,500.00	90.00	359.54	9,230.00	1,444.99	-230.04	1,455.17	0.00	0.00	0.00
10,600.00	90.00	359.54	9,230.00	1,544.98	-230.84	1,555.07	0.00	0.00	0.00
10,700.00	90.00	359.54	9,230.00	1,644.98	-231.64	1,654.97	0.00	0.00	0.00
10,800.00	90.00	359.54	9,230.00	1,744.98	-232.44	1,754.87	0.00	0.00	0.00
10,900.00	90.00	359.54	9,230.00	1,844.97	-233.23	1,854.77	0.00	0.00	0.00
11,000.00	90.00	359.54	9,230.00	1,944.97	-234.03	1,954.66	0.00	0.00	0.00



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM
Site: Gem 36 State Com
Well: Gem 36 State Com #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Gem 36 State Com #2H
TVD Reference: WELL @ 3406.00usft (3376' GL +30' KB)
MD Reference: WELL @ 3406.00usft (3376' GL +30' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
11,100.00	90.00	359.54	9,230.00	2,044.97	-234.83	2,054.56	0.00	0.00	0.00
11,200.00	90.00	359.54	9,230.00	2,144.96	-235.62	2,154.46	0.00	0.00	0.00
11,300.00	90.00	359.54	9,230.00	2,244.96	-236.42	2,254.36	0.00	0.00	0.00
11,400.00	90.00	359.54	9,230.00	2,344.96	-237.22	2,354.25	0.00	0.00	0.00
11,500.00	90.00	359.54	9,230.00	2,444.95	-238.02	2,454.15	0.00	0.00	0.00
11,600.00	90.00	359.54	9,230.00	2,544.95	-238.81	2,554.05	0.00	0.00	0.00
11,700.00	90.00	359.54	9,230.00	2,644.95	-239.61	2,653.95	0.00	0.00	0.00
11,800.00	90.00	359.54	9,230.00	2,744.94	-240.41	2,753.84	0.00	0.00	0.00
11,900.00	90.00	359.54	9,230.00	2,844.94	-241.21	2,853.74	0.00	0.00	0.00
12,000.00	90.00	359.54	9,230.00	2,944.94	-242.00	2,953.64	0.00	0.00	0.00
12,100.00	90.00	359.54	9,230.00	3,044.93	-242.80	3,053.54	0.00	0.00	0.00
12,200.00	90.00	359.54	9,230.00	3,144.93	-243.60	3,153.44	0.00	0.00	0.00
12,300.00	90.00	359.54	9,230.00	3,244.93	-244.39	3,253.33	0.00	0.00	0.00
12,400.00	90.00	359.54	9,230.00	3,344.93	-245.19	3,353.23	0.00	0.00	0.00
12,500.00	90.00	359.54	9,230.00	3,444.92	-245.99	3,453.13	0.00	0.00	0.00
12,600.00	90.00	359.54	9,230.00	3,544.92	-246.79	3,553.03	0.00	0.00	0.00
12,700.00	90.00	359.54	9,230.00	3,644.92	-247.58	3,652.92	0.00	0.00	0.00
12,800.00	90.00	359.54	9,230.00	3,744.91	-248.38	3,752.82	0.00	0.00	0.00
12,900.00	90.00	359.54	9,230.00	3,844.91	-249.18	3,852.72	0.00	0.00	0.00
13,000.00	90.00	359.54	9,230.00	3,944.91	-249.98	3,952.62	0.00	0.00	0.00
13,100.00	90.00	359.54	9,230.00	4,044.90	-250.77	4,052.52	0.00	0.00	0.00
13,200.00	90.00	359.54	9,230.00	4,144.90	-251.57	4,152.41	0.00	0.00	0.00
13,300.00	90.00	359.54	9,230.00	4,244.90	-252.37	4,252.31	0.00	0.00	0.00
13,400.00	90.00	359.54	9,230.00	4,344.89	-253.16	4,352.21	0.00	0.00	0.00
13,500.00	90.00	359.54	9,230.00	4,444.89	-253.96	4,452.11	0.00	0.00	0.00
13,600.00	90.00	359.54	9,230.00	4,544.89	-254.76	4,552.00	0.00	0.00	0.00
13,700.00	90.00	359.54	9,230.00	4,644.88	-255.56	4,651.90	0.00	0.00	0.00
13,781.12	90.00	359.54	9,230.00	4,726.00	-256.20	4,732.94	0.00	0.00	0.00
L Perf									
13,800.00	90.00	359.54	9,230.00	4,744.88	-256.35	4,751.80	0.00	0.00	0.00
13,881.12	90.00	359.54	9,230.00	4,826.00	-257.00	4,832.84	0.00	0.00	0.00
TD at 13881.12									



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM
Site: Gem 36 State Com
Well: Gem 36 State Com #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Gem 36 State Com #2H
TVD Reference: WELL @ 3406.00usft (3376' GL +30' KB)
MD Reference: WELL @ 3406.00usft (3376' GL +30' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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
Gem 36 State Com #2H - plan misses target center by 0.80usft at 13781.13usft MD (9230.00 TVD, 4726.01 N, -256.20 E) - Point	0.00	0.00	9,230.00	4,726.00	-257.00	398,380.00	720,199.00	32° 5' 35.781 N	103° 37' 20.241 W
Gem 36 State Com #2H - plan misses target center by 200.30usft at 9226.33usft MD (9152.31 TVD, 206.72 N, -63.99 E) - Point	0.00	0.00	9,230.00	108.00	-220.00	393,762.00	720,236.00	32° 4' 50.059 N	103° 37' 20.165 W
Gem 36 State Com #2H - plan hits target center - Point	0.00	0.00	9,230.00	4,826.00	-257.00	398,480.00	720,199.00	32° 5' 36.750 N	103° 37' 20.233 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8753	8753	0	0	KOP, Build @ 12° DLS
9088	9061	108	-33	U Perf
9503	9230	456	-141	LP, Turn @ 3° DLS
10,061	9230	1006	-227	Hold 90° Inc @ 359.54° Azi
13,781	9230	4726	-256	L Perf
13,881	9230	4826	-257	TD at 13881.12

Checked By: _____ Approved By: _____ Date: _____