

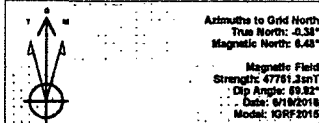
30-025-44945



Lea County, NM (NAD 83 NME)

Gem 36 State Com #102H

Plan 0.2



To convert a Magnetic Direction to a Grid Direction, Add 6.48°
To convert a Magnetic Direction to a True Direction, Add 6.86° East
To convert a True Direction to a Grid Direction, Subtract 0.38°

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: #102H

KB = 25 @ 3482.0m
Northing 382014.00 Easting 762081.00 32° 5' 31.973 N 103° 37' 14.518 W

SECTION DETAILS

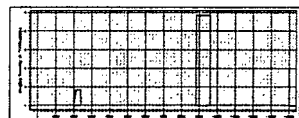
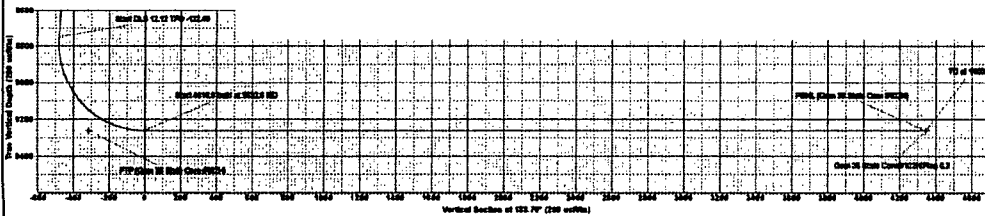
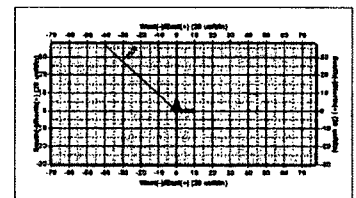
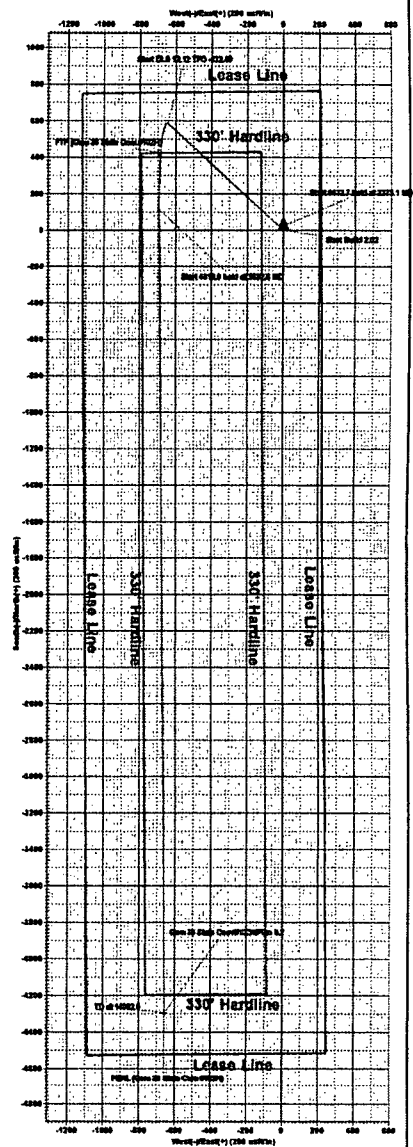
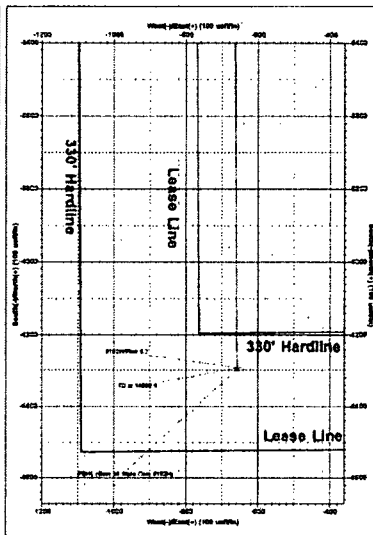
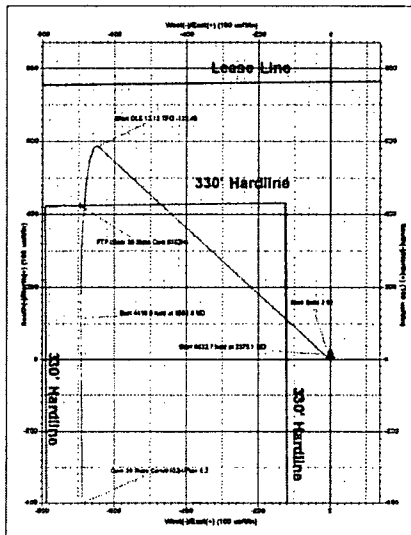
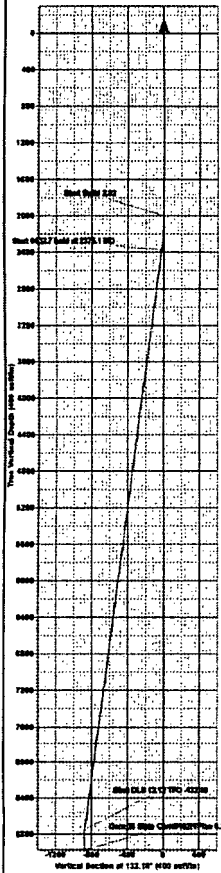
Sec	MD	Inc	Art	TVD	+N-E	+E-W	Deg	TFace	VFace	Target	Annotation
1	0.0	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.0		
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0		
3	2376.1	7.88	312.18	2376.0	16.8	-16.4	2.02	312.18	-13.7		
4	6897.7	7.88	312.18	6896.8	689.1	-448.8	0.00	0.00	-481.8		
5	9892.8	80.00	179.83	9283.0	114.9	-483.2	12.12	-132.48	-8.7		
6	14092.8	90.00	179.83	9283.0	-4286.0	-487.0	0.00	0.00	4345.0		PE#6, (Gem 36 State Com #102H)

CASING DETAILS

No casing data is available

WELLBORE TAPPOINT DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-E	+E-W	Northing	Easting
PE#6, (Gem 36 State Com #102H)	9283.0	-4286.0	-487.0	382719.00	761404.00
FTP (Gem 36 State Com #102H)	9283.0	434.0	436.0	382438.00	761268.00





EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Gem 36 State Com

#102H

OH

Plan: Plan 0.2

Standard Planning Report

26 June, 2018



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Gem 36 State Corn
Well: #102H
Wellbore: OH
Design: Plan 0.2

Local Co-ordinate Reference: Well #102H
TVD Reference: KB = 25 @ 3462.0usft
MD Reference: KB = 25 @ 3462.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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 Corn				
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	#102H				
Well Position	+N/-S	4,328.0 usft	Northing:	398,014.00 usft	Latitude: 32° 5' 31.973 N
	+E/-W	2,848.0 usft	Easting:	762,061.00 usft	Longitude: 103° 37' 14.118 W
Position Uncertainty	0.0 usft		Wellhead Elevation:		Ground Level: 3,437.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/19/2018	6.86	59.92	47,751.30294206

Design	Plan 0.2				
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	188.70	

Plan Survey Tool Program	Date 6/26/2018				
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1 0.0	14,002.6	Plan 0.2 (OH)	MWD	OWSG 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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,375.1	7.58	312.18	2,374.0	16.6	-18.4	2.02	2.02	0.00	312.18	
8,807.7	7.58	312.18	8,750.5	586.1	-646.9	0.00	0.00	0.00	0.00	
9,592.6	90.00	179.53	9,263.0	114.9	-693.2	12.12	10.50	-16.90	-132.40	
14,002.6	90.00	179.53	9,263.0	-4,295.0	-657.0	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: #102H
 Wellbore: OH
 Design: Plan 0.2

Local Co-ordinate Reference: Well #102H
 TVD Reference: KB = 25 @ 3462.0usft
 MD Reference: KB = 25 @ 3462.0usft
 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	2.02	312.18	2,100.0	1.2	-1.3	-1.0	2.02	2.02	0.00
2,200.0	4.04	312.18	2,199.8	4.7	-5.2	-3.9	2.02	2.02	0.00
2,300.0	6.06	312.18	2,299.4	10.6	-11.7	-8.7	2.02	2.02	0.00
2,375.1	7.58	312.18	2,374.0	16.6	-18.4	-13.7	2.02	2.02	0.00
2,400.0	7.58	312.18	2,398.7	18.8	-20.8	-15.5	0.00	0.00	0.00
2,500.0	7.58	312.18	2,497.8	27.7	-30.6	-22.7	0.00	0.00	0.00
2,600.0	7.58	312.18	2,596.9	36.5	-40.3	-30.0	0.00	0.00	0.00
2,700.0	7.58	312.18	2,696.1	45.4	-50.1	-37.3	0.00	0.00	0.00
2,800.0	7.58	312.18	2,795.2	54.2	-59.9	-44.6	0.00	0.00	0.00
2,900.0	7.58	312.18	2,894.3	63.1	-69.6	-51.8	0.00	0.00	0.00
3,000.0	7.58	312.18	2,993.5	71.9	-79.4	-59.1	0.00	0.00	0.00
3,100.0	7.58	312.18	3,092.6	80.8	-89.2	-66.4	0.00	0.00	0.00
3,200.0	7.58	312.18	3,191.7	89.7	-99.0	-73.7	0.00	0.00	0.00
3,300.0	7.58	312.18	3,290.8	98.5	-108.7	-80.9	0.00	0.00	0.00
3,400.0	7.58	312.18	3,390.0	107.4	-118.5	-88.2	0.00	0.00	0.00
3,500.0	7.58	312.18	3,489.1	116.2	-128.3	-95.5	0.00	0.00	0.00
3,600.0	7.58	312.18	3,588.2	125.1	-138.0	-102.8	0.00	0.00	0.00
3,700.0	7.58	312.18	3,687.3	133.9	-147.8	-110.0	0.00	0.00	0.00
3,800.0	7.58	312.18	3,786.5	142.8	-157.6	-117.3	0.00	0.00	0.00
3,900.0	7.58	312.18	3,885.6	151.6	-167.4	-124.6	0.00	0.00	0.00
4,000.0	7.58	312.18	3,984.7	160.5	-177.1	-131.8	0.00	0.00	0.00
4,100.0	7.58	312.18	4,083.8	169.3	-186.9	-139.1	0.00	0.00	0.00
4,200.0	7.58	312.18	4,183.0	178.2	-196.7	-146.4	0.00	0.00	0.00
4,300.0	7.58	312.18	4,282.1	187.0	-206.4	-153.7	0.00	0.00	0.00
4,400.0	7.58	312.18	4,381.2	195.9	-216.2	-160.9	0.00	0.00	0.00
4,500.0	7.58	312.18	4,480.4	204.7	-226.0	-168.2	0.00	0.00	0.00
4,600.0	7.58	312.18	4,579.5	213.6	-235.8	-175.5	0.00	0.00	0.00
4,700.0	7.58	312.18	4,678.6	222.4	-245.5	-182.8	0.00	0.00	0.00
4,800.0	7.58	312.18	4,777.7	231.3	-255.3	-190.0	0.00	0.00	0.00
4,900.0	7.58	312.18	4,876.9	240.2	-265.1	-197.3	0.00	0.00	0.00
5,000.0	7.58	312.18	4,976.0	249.0	-274.8	-204.6	0.00	0.00	0.00
5,100.0	7.58	312.18	5,075.1	257.9	-284.6	-211.9	0.00	0.00	0.00
5,200.0	7.58	312.18	5,174.2	266.7	-294.4	-219.1	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 Com
 Well: #102H
 Wellbore: OH
 Design: Plan 0.2

Local Co-ordinate Reference: Well #102H
 TVD Reference: KB = 25 @ 3462.0usft
 MD Reference: KB = 25 @ 3462.0usft
 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)
5,300.0	7.58	312.18	5,273.4	275.6	-304.2	-226.4	0.00	0.00	0.00
5,400.0	7.58	312.18	5,372.5	284.4	-313.9	-233.7	0.00	0.00	0.00
5,500.0	7.58	312.18	5,471.6	293.3	-323.7	-241.0	0.00	0.00	0.00
5,600.0	7.58	312.18	5,570.8	302.1	-333.5	-248.2	0.00	0.00	0.00
5,700.0	7.58	312.18	5,669.9	311.0	-343.2	-255.5	0.00	0.00	0.00
5,800.0	7.58	312.18	5,769.0	319.8	-353.0	-262.8	0.00	0.00	0.00
5,900.0	7.58	312.18	5,868.1	328.7	-362.8	-270.0	0.00	0.00	0.00
6,000.0	7.58	312.18	5,967.3	337.5	-372.5	-277.3	0.00	0.00	0.00
6,100.0	7.58	312.18	6,066.4	346.4	-382.3	-284.6	0.00	0.00	0.00
6,200.0	7.58	312.18	6,165.5	355.2	-392.1	-291.9	0.00	0.00	0.00
6,300.0	7.58	312.18	6,264.6	364.1	-401.9	-299.1	0.00	0.00	0.00
6,400.0	7.58	312.18	6,363.8	372.9	-411.6	-306.4	0.00	0.00	0.00
6,500.0	7.58	312.18	6,462.9	381.8	-421.4	-313.7	0.00	0.00	0.00
6,600.0	7.58	312.18	6,562.0	390.6	-431.2	-321.0	0.00	0.00	0.00
6,700.0	7.58	312.18	6,661.1	399.5	-440.9	-328.2	0.00	0.00	0.00
6,800.0	7.58	312.18	6,760.3	408.4	-450.7	-335.5	0.00	0.00	0.00
6,900.0	7.58	312.18	6,859.4	417.2	-460.5	-342.8	0.00	0.00	0.00
7,000.0	7.58	312.18	6,958.5	426.1	-470.3	-350.1	0.00	0.00	0.00
7,100.0	7.58	312.18	7,057.7	434.9	-480.0	-357.3	0.00	0.00	0.00
7,200.0	7.58	312.18	7,156.8	443.8	-489.8	-364.6	0.00	0.00	0.00
7,300.0	7.58	312.18	7,255.9	452.6	-499.6	-371.9	0.00	0.00	0.00
7,400.0	7.58	312.18	7,355.0	461.5	-509.3	-379.1	0.00	0.00	0.00
7,500.0	7.58	312.18	7,454.2	470.3	-519.1	-386.4	0.00	0.00	0.00
7,600.0	7.58	312.18	7,553.3	479.2	-528.9	-393.7	0.00	0.00	0.00
7,700.0	7.58	312.18	7,652.4	488.0	-538.7	-401.0	0.00	0.00	0.00
7,800.0	7.58	312.18	7,751.5	496.9	-548.4	-408.2	0.00	0.00	0.00
7,900.0	7.58	312.18	7,850.7	505.7	-558.2	-415.5	0.00	0.00	0.00
8,000.0	7.58	312.18	7,949.8	514.6	-568.0	-422.8	0.00	0.00	0.00
8,100.0	7.58	312.18	8,048.9	523.4	-577.7	-430.1	0.00	0.00	0.00
8,200.0	7.58	312.18	8,148.1	532.3	-587.5	-437.3	0.00	0.00	0.00
8,300.0	7.58	312.18	8,247.2	541.1	-597.3	-444.6	0.00	0.00	0.00
8,400.0	7.58	312.18	8,346.3	550.0	-607.1	-451.9	0.00	0.00	0.00
8,500.0	7.58	312.18	8,445.4	558.9	-616.8	-459.2	0.00	0.00	0.00
8,600.0	7.58	312.18	8,544.6	567.7	-626.6	-466.4	0.00	0.00	0.00
8,700.0	7.58	312.18	8,643.7	576.6	-636.4	-473.7	0.00	0.00	0.00
8,807.7	7.58	312.18	8,750.5	586.1	-646.9	-481.5	0.00	0.00	0.00
8,825.0	6.36	298.08	8,767.6	587.3	-648.6	-482.5	12.12	-7.07	-81.66
8,850.0	5.59	269.55	8,792.5	588.0	-651.0	-482.7	12.12	-3.07	-114.10
8,875.0	6.35	241.02	8,817.4	587.3	-653.4	-481.7	12.12	3.06	-114.14
8,900.0	8.23	222.07	8,842.2	585.3	-655.9	-479.4	12.12	7.52	-75.80
8,925.0	10.66	210.86	8,866.8	582.0	-658.2	-475.7	12.12	9.69	-44.83
8,950.0	13.33	203.92	8,891.3	577.3	-660.6	-470.8	12.12	10.68	-27.74
8,975.0	16.12	199.31	8,915.5	571.4	-662.9	-464.6	12.12	11.19	-18.45
9,000.0	18.99	196.05	8,939.3	564.2	-665.2	-457.2	12.12	11.47	-13.06
9,025.0	21.90	193.62	8,962.7	555.8	-667.4	-448.5	12.12	11.64	-9.72
9,050.0	24.84	191.73	8,985.7	546.1	-669.6	-438.6	12.12	11.75	-7.53
9,075.0	27.79	190.23	9,008.1	535.2	-671.7	-427.5	12.12	11.82	-6.02
9,100.0	30.76	188.89	9,029.9	523.2	-673.7	-415.3	12.12	11.88	-4.95
9,125.0	33.74	187.95	9,051.0	510.0	-675.7	-402.0	12.12	11.92	-4.15
9,150.0	36.73	187.07	9,071.4	495.7	-677.6	-387.5	12.12	11.95	-3.55
9,175.0	39.72	186.29	9,091.1	480.3	-679.4	-372.1	12.12	11.97	-3.09
9,200.0	42.71	185.61	9,109.9	464.0	-681.1	-355.6	12.12	11.99	-2.72
9,225.0	45.72	185.01	9,127.8	448.6	-682.7	-338.2	12.12	12.00	-2.43
9,250.0	48.72	184.46	9,144.8	428.3	-684.2	-319.9	12.12	12.01	-2.19



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Gem 36 State Com
 Well: #102H
 Wellbore: OH
 Design: Plan 0.2

Local Co-ordinate Reference: Well #102H
 TVD Reference: KB = 25 @ 3462.0usft
 MD Reference: KB = 25 @ 3462.0usft
 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)
9,275.0	51.72	183.96	9,160.8	409.2	-685.6	-300.8	12.12	12.02	-2.00
9,300.0	54.73	183.50	9,175.7	389.2	-686.9	-280.8	12.12	12.03	-1.84
9,320.0	57.14	183.15	9,186.9	372.6	-687.8	-264.4	12.12	12.04	-1.72
FTP (Gem 36 State Com #102H)									
9,325.0	57.74	183.07	9,189.6	368.4	-688.1	-260.2	12.12	12.04	-1.66
9,350.0	60.75	182.67	9,202.4	347.0	-689.1	-238.8	12.12	12.04	-1.60
9,375.0	63.76	182.29	9,214.0	324.9	-690.1	-216.8	12.12	12.05	-1.51
9,400.0	66.78	181.94	9,224.5	302.2	-690.9	-194.2	12.12	12.05	-1.43
9,425.0	69.79	181.59	9,233.7	279.0	-691.7	-171.2	12.12	12.05	-1.37
9,450.0	72.80	181.27	9,241.8	255.3	-692.2	-147.7	12.12	12.06	-1.32
9,475.0	75.82	180.95	9,248.5	231.2	-692.7	-123.8	12.12	12.06	-1.27
9,500.0	78.83	180.64	9,254.0	206.9	-693.0	-99.7	12.12	12.06	-1.24
9,525.0	81.85	180.33	9,258.2	182.2	-693.3	-75.3	12.12	12.06	-1.21
9,550.0	84.86	180.03	9,261.1	157.4	-693.3	-50.7	12.12	12.06	-1.20
9,575.0	87.88	179.74	9,262.7	132.4	-693.3	-26.1	12.12	12.06	-1.19
9,592.6	90.00	179.53	9,263.0	114.9	-693.2	-8.7	12.12	12.06	-1.18
9,600.0	90.00	179.53	9,263.0	107.4	-693.1	-1.4	0.00	0.00	0.00
9,700.0	90.00	179.53	9,263.0	7.4	-692.3	97.3	0.00	0.00	0.00
9,800.0	90.00	179.53	9,263.0	-92.5	-691.5	196.0	0.00	0.00	0.00
9,900.0	90.00	179.53	9,263.0	-192.5	-690.7	294.8	0.00	0.00	0.00
10,000.0	90.00	179.53	9,263.0	-292.5	-689.8	393.5	0.00	0.00	0.00
10,100.0	90.00	179.53	9,263.0	-392.5	-689.0	492.2	0.00	0.00	0.00
10,200.0	90.00	179.53	9,263.0	-492.5	-688.2	590.9	0.00	0.00	0.00
10,300.0	90.00	179.53	9,263.0	-592.5	-687.4	689.7	0.00	0.00	0.00
10,400.0	90.00	179.53	9,263.0	-692.5	-686.6	788.4	0.00	0.00	0.00
10,500.0	90.00	179.53	9,263.0	-792.5	-685.7	887.1	0.00	0.00	0.00
10,600.0	90.00	179.53	9,263.0	-892.5	-684.9	985.8	0.00	0.00	0.00
10,700.0	90.00	179.53	9,263.0	-992.5	-684.1	1,084.5	0.00	0.00	0.00
10,800.0	90.00	179.53	9,263.0	-1,092.5	-683.3	1,183.3	0.00	0.00	0.00
10,900.0	90.00	179.53	9,263.0	-1,192.5	-682.5	1,282.0	0.00	0.00	0.00
11,000.0	90.00	179.53	9,263.0	-1,292.5	-681.6	1,380.7	0.00	0.00	0.00
11,100.0	90.00	179.53	9,263.0	-1,392.5	-680.8	1,479.4	0.00	0.00	0.00
11,200.0	90.00	179.53	9,263.0	-1,492.5	-680.0	1,578.2	0.00	0.00	0.00
11,300.0	90.00	179.53	9,263.0	-1,592.5	-679.2	1,676.9	0.00	0.00	0.00
11,400.0	90.00	179.53	9,263.0	-1,692.5	-678.3	1,775.6	0.00	0.00	0.00
11,500.0	90.00	179.53	9,263.0	-1,792.5	-677.5	1,874.3	0.00	0.00	0.00
11,600.0	90.00	179.53	9,263.0	-1,892.5	-676.7	1,973.1	0.00	0.00	0.00
11,700.0	90.00	179.53	9,263.0	-1,992.5	-675.9	2,071.8	0.00	0.00	0.00
11,800.0	90.00	179.53	9,263.0	-2,092.5	-675.1	2,170.5	0.00	0.00	0.00
11,900.0	90.00	179.53	9,263.0	-2,192.5	-674.2	2,269.2	0.00	0.00	0.00
12,000.0	90.00	179.53	9,263.0	-2,292.5	-673.4	2,367.9	0.00	0.00	0.00
12,100.0	90.00	179.53	9,263.0	-2,392.5	-672.6	2,466.7	0.00	0.00	0.00
12,200.0	90.00	179.53	9,263.0	-2,492.5	-671.8	2,565.4	0.00	0.00	0.00
12,300.0	90.00	179.53	9,263.0	-2,592.5	-671.0	2,664.1	0.00	0.00	0.00
12,400.0	90.00	179.53	9,263.0	-2,692.5	-670.1	2,762.8	0.00	0.00	0.00
12,500.0	90.00	179.53	9,263.0	-2,792.5	-669.3	2,861.6	0.00	0.00	0.00
12,600.0	90.00	179.53	9,263.0	-2,892.5	-668.5	2,960.3	0.00	0.00	0.00
12,700.0	90.00	179.53	9,263.0	-2,992.5	-667.7	3,059.0	0.00	0.00	0.00
12,800.0	90.00	179.53	9,263.0	-3,092.4	-666.9	3,157.7	0.00	0.00	0.00
12,900.0	90.00	179.53	9,263.0	-3,192.4	-666.0	3,256.4	0.00	0.00	0.00
13,000.0	90.00	179.53	9,263.0	-3,292.4	-665.2	3,355.2	0.00	0.00	0.00
13,100.0	90.00	179.53	9,263.0	-3,392.4	-664.4	3,453.9	0.00	0.00	0.00
13,200.0	90.00	179.53	9,263.0	-3,492.4	-663.6	3,552.6	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 Com
Well: #102H
Wellbore: OH
Design: Plan 0.2

Local Co-ordinate Reference: Well #102H
TVD Reference: KB = 25 @ 3462.0usft
MD Reference: KB = 25 @ 3462.0usft
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)
13,300.0	90.00	179.53	9,263.0	-3,592.4	-662.8	3,651.3	0.00	0.00	0.00
13,400.0	90.00	179.53	9,263.0	-3,692.4	-661.9	3,750.1	0.00	0.00	0.00
13,500.0	90.00	179.53	9,263.0	-3,792.4	-661.1	3,848.8	0.00	0.00	0.00
13,600.0	90.00	179.53	9,263.0	-3,892.4	-660.3	3,947.5	0.00	0.00	0.00
13,700.0	90.00	179.53	9,263.0	-3,992.4	-659.5	4,046.2	0.00	0.00	0.00
13,800.0	90.00	179.53	9,263.0	-4,092.4	-658.7	4,145.0	0.00	0.00	0.00
13,900.0	90.00	179.53	9,263.0	-4,192.4	-657.8	4,243.7	0.00	0.00	0.00
14,002.6	90.00	179.53	9,263.0	-4,295.0	-657.0	4,345.0	0.00	0.00	0.00

PBHL (Gem 36 State Com #102H)

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
FTP (Gem 36 State Com - plan misses target center by 92.1usft at 9320.0usft MD (9186.9 TVD, 372.6 N, -687.8 E) - Point	0.00	0.00	9,263.0	424.0	-695.0	398,438.00	761,366.00	32° 5' 36.215 N	103° 37' 22.165 W
PBHL (Gem 36 State Co - plan hits target center - Point	0.00	0.00	9,263.0	-4,295.0	-657.0	393,719.00	761,404.00	32° 4' 49.515 N	103° 37' 22.084 W

EOG RESOURCES, INC.
GEM 36 STATE COM #102H

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.
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- **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 #102H

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

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