



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Gem 36 State Com

#504H

OH

Design: OH

Midland PVA

12 December, 2019



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3435.0usft
Site:	Gem 36 State Com	MD Reference:	KB = 25 @ 3435.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

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

Well	#504H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			usft
			Latitude:
			32° 5' 36.912 N
			Longitude:
			103° 37' 42.421 W
			Ground Level:
			3,410.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	9/18/2019	6.73
			Dip Angle
			59.90
			Field Strength
			47,623.38363617

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			173.92

Survey Program	Date 12/12/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
174.0	15,748.0	Drilltech MWD (OH)	MWD
			Description
			OWSG MWD - Standard



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Site:	Gem 36 State Com	MD Reference:	KB = 25 @ 3435.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
174.0	0.88	177.38	174.0	-1.3	0.1	0.51	0.51	0.00	-1.3	0.0
232.0	1.14	185.99	232.0	-2.4	0.0	0.52	0.45	14.84	-2.3	0.3
291.0	1.41	162.52	291.0	-3.6	0.2	0.99	0.46	-39.78	-3.5	-0.9
350.0	1.32	160.59	350.0	-5.0	0.6	0.17	-0.15	-3.27	-4.9	-1.1
409.0	1.23	186.87	408.9	-6.2	0.8	0.99	-0.15	44.54	-6.1	1.5
468.0	1.06	192.23	467.9	-7.4	0.6	0.34	-0.29	9.08	-7.1	2.1
528.0	0.88	195.13	527.9	-8.4	0.3	0.31	-0.30	4.83	-8.0	2.5
588.0	0.62	230.46	587.9	-9.0	0.0	0.86	-0.43	58.88	-5.8	6.9
648.0	0.70	267.20	647.9	-9.3	-0.6	0.70	0.13	61.23	-1.1	9.2
711.0	0.79	263.33	710.9	-9.3	-1.5	0.16	0.14	-6.14	-2.5	9.1
806.0	1.23	283.99	805.9	-9.2	-3.1	0.59	0.46	21.75	-0.8	9.6
965.0	1.32	296.10	964.9	-7.9	-6.4	0.18	0.06	7.62	-1.5	9.9
1,059.0	0.62	347.17	1,058.8	-7.0	-7.5	1.11	-0.74	54.33	7.6	5.2
1,153.0	2.20	59.41	1,152.8	-5.6	-6.0	2.23	1.68	76.85	1.3	-10.5
1,247.0	4.04	67.15	1,246.7	-3.3	-1.4	2.00	1.96	8.23	-11.8	-17.1
1,342.0	6.42	65.13	1,341.3	0.2	6.5	2.51	2.51	-2.13	-26.5	-25.0
1,436.0	8.09	61.44	1,434.5	5.6	17.0	1.84	1.78	-3.93	-42.7	-34.7
1,530.0	7.65	59.68	1,527.6	11.9	28.3	0.53	-0.47	-1.87	-60.5	-44.0
1,624.0	7.47	58.27	1,620.8	18.3	38.8	0.27	-0.19	-1.50	-77.5	-53.5
1,718.0	7.30	56.95	1,714.0	24.7	49.1	0.26	-0.18	-1.40	-93.8	-63.5
1,812.0	7.03	55.72	1,807.3	31.2	58.8	0.33	-0.29	-1.31	-109.6	-73.7
1,907.0	6.95	55.81	1,901.6	37.7	68.4	0.08	-0.08	0.09	-126.7	-81.8
2,001.0	6.77	55.99	1,994.9	44.0	77.7	0.19	-0.19	0.19	-143.6	-89.4
2,095.0	6.51	55.46	2,088.3	50.1	86.6	0.28	-0.28	-0.56	-159.0	-98.9
2,190.0	6.16	52.21	2,182.7	56.3	95.1	0.53	-0.37	-3.42	-168.6	-116.7
2,284.0	5.98	48.87	2,276.2	62.6	102.8	0.42	-0.19	-3.55	-175.8	-135.4



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3435.0usft
Site:	Gem 3S State Com	MD Reference:	KB = 25 @ 3435.0usft
Well:	#504H	North Reference:	Gtd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	D-leg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
	2,378.0	6.33	56.43	2,369.6	68.7	110.8	0.94	0.37	8.04	-207.7	-118.4
	2,472.0	6.86	63.46	2,463.0	74.1	120.1	1.03	0.56	7.48	-237.9	-98.6
	2,566.0	6.77	61.26	2,556.4	79.3	130.0	0.29	-0.10	-2.34	-251.2	-115.5
	2,661.0	6.86	58.80	2,650.7	84.9	139.8	0.32	0.09	-2.59	-263.0	-134.6
	2,755.0	7.03	57.30	2,744.0	90.9	149.4	0.26	0.18	-1.60	-276.3	-149.7
	2,849.0	7.21	55.89	2,837.3	97.3	159.1	0.26	0.19	-1.39	-288.7	-164.5
	2,943.0	7.56	60.47	2,930.5	103.7	169.4	0.72	0.37	4.77	-319.9	-149.3
	3,037.0	7.39	65.13	3,023.7	109.3	180.3	0.67	-0.18	4.96	-349.9	-128.0
	3,131.0	7.03	61.00	3,116.9	114.6	190.8	0.67	-0.38	-4.39	-357.5	-161.1
	3,225.0	6.86	57.22	3,210.3	120.4	200.6	0.52	-0.18	-4.02	-362.8	-193.0
	3,319.0	7.56	53.33	3,303.5	127.1	210.2	0.89	0.74	-3.93	-366.1	-225.4
	3,413.0	7.47	57.80	3,396.7	134.1	220.4	0.53	-0.10	4.01	-388.2	-208.0
	3,508.0	6.95	67.94	3,491.0	139.6	230.9	1.51	-0.55	11.20	-449.2	-135.0
	3,602.0	6.33	66.71	3,584.3	143.8	240.9	0.68	-0.66	-1.31	-463.9	-151.5
	3,696.0	5.98	70.40	3,677.8	147.5	250.3	0.56	-0.37	3.93	-490.2	-126.9
	3,790.0	5.72	75.60	3,771.3	150.3	259.4	0.62	-0.28	5.43	-517.1	-87.5
	3,884.0	5.89	79.63	3,864.8	152.3	268.7	0.48	0.18	4.39	-539.8	-54.4
	3,979.0	5.45	83.58	3,958.4	153.7	278.0	0.62	-0.46	4.16	-560.3	-20.9
	4,073.0	5.36	89.38	4,052.9	154.3	286.8	0.59	-0.10	6.17	-577.3	33.4
	4,167.0	5.45	94.83	4,146.5	153.9	295.7	0.55	0.10	5.80	-596.6	86.3
	4,261.0	5.54	94.48	4,240.1	153.2	304.6	0.10	0.10	-0.37	-608.5	79.8
	4,355.0	5.19	85.25	4,333.7	153.2	313.4	0.98	-0.37	-9.82	-630.8	-25.4
	4,450.0	5.45	74.44	4,428.3	154.8	322.0	1.09	0.27	-11.38	-631.0	-151.6
	4,544.0	5.80	75.69	4,521.8	157.1	330.9	0.39	0.37	1.22	-651.0	-144.7
	4,639.0	5.54	79.10	4,616.4	159.1	340.1	0.52	-0.27	4.53	-677.8	-99.5
	4,821.0	4.48	79.10	4,797.7	162.0	355.7	0.58	-0.58	-0.43	-708.2	-119.0
	4,915.0	4.22	78.13	4,891.4	163.4	362.7	0.29	-0.28	-1.03	-721.3	-136.5



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Site:	Gem 36 State Com	MD Reference:	KB = 25 @ 3435.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
5,009.0	4.31	80.16	4,985.1	164.7	369.6	0.19	0.10	2.16	-741.0	-115.7	
5,103.0	4.31	77.43	5,078.9	166.1	376.5	0.22	0.00	-2.90	-749.7	-156.9	
5,197.0	4.22	80.51	5,172.6	167.5	383.4	0.26	-0.10	3.28	-772.4	-120.9	
5,291.0	4.13	81.03	5,266.3	168.6	390.1	0.10	-0.10	0.55	-788.7	-118.8	
5,385.0	3.87	84.55	5,360.1	169.4	396.6	0.38	-0.28	3.74	-809.8	-73.9	
5,480.0	3.96	83.85	5,454.9	170.0	403.1	0.11	0.09	-0.74	-824.0	-88.6	
5,574.0	3.96	85.08	5,548.7	170.7	409.5	0.09	0.00	1.31	-841.0	-75.1	
5,669.0	3.87	85.61	5,643.5	171.2	416.0	0.10	-0.09	0.56	-857.0	-71.6	
5,763.0	4.75	67.50	5,737.2	172.9	422.7	1.71	0.94	-19.27	-804.9	-345.2	
5,857.0	5.01	64.69	5,830.8	176.2	430.1	0.38	0.28	-2.99	-801.3	-392.3	
5,952.0	4.75	65.57	5,925.5	179.6	437.4	0.28	-0.27	0.93	-822.3	-386.7	
6,046.0	4.84	65.39	6,019.2	182.8	444.5	0.10	0.10	-0.19	-834.9	-395.6	
6,140.0	4.75	64.86	6,112.8	186.1	451.7	0.11	-0.10	-0.56	-842.4	-405.9	
6,234.0	4.57	66.01	6,206.5	189.3	458.6	0.22	-0.19	1.22	-858.8	-388.5	
6,329.0	3.25	42.10	6,301.3	192.9	463.9	2.18	-1.39	-25.17	-634.1	-704.6	
6,423.0	2.81	4.83	6,395.2	197.1	465.8	2.11	-0.47	-39.65	-83.0	-946.2	
6,517.0	3.08	0.09	6,489.1	201.9	466.0	0.39	0.29	-5.04	-9.4	-950.0	
6,612.0	2.99	2.28	6,583.9	207.0	466.1	0.15	-0.09	2.31	-50.7	-948.9	
6,706.0	3.08	7.29	6,677.8	211.9	466.6	0.30	0.10	5.33	-138.2	-940.6	
6,800.0	0.53	35.86	6,771.8	214.8	467.1	2.79	-2.71	30.39	-574.0	-758.7	
6,895.0	0.53	71.28	6,866.7	215.3	467.8	0.34	0.00	37.28	-908.3	-285.3	
6,989.0	0.53	75.76	6,960.7	215.5	468.6	0.04	0.00	4.77	-928.7	-213.5	
7,083.0	0.53	74.97	7,054.7	215.8	469.5	0.01	0.00	-0.84	-926.5	-226.3	
7,177.0	0.62	90.35	7,148.7	215.9	470.4	0.19	0.10	16.36	-954.3	27.7	
7,271.0	0.53	106.44	7,242.7	215.7	471.3	0.20	-0.10	17.12	-910.1	291.2	
7,366.0	0.53	122.87	7,337.7	215.4	472.1	0.16	0.00	17.29	-791.5	536.9	
7,460.0	0.88	152.84	7,431.7	214.5	472.8	0.53	0.37	31.88	-418.5	860.7	



Midland PVA

Company: EOG Resources - Midland				Local Co-ordinate Reference: Well #504H						
Project: Lea County, NM (NAD 83 NME)				TVD Reference: KB = 25 @ 3435.0usft						
Site: Gen 36 State Com				TMD Reference: KB = 25 @ 3435.0usft						
Well: #504H				North Reference: Grid						
Wellbore: OH				Survey Calculation Method: Minimum Curvature						
Design: OH				Database: EDM						
Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
7,541.9	0.86	141.20	7,513.7	213.4	473.5	0.25	0.09	-14.20	-584.8	758.5
Brushy Top (Gen 36 State Com #504H)										
7,554.0	0.97	139.66	7,525.7	213.2	473.7	0.25	0.12	-12.80	-605.2	742.5
7,648.0	1.14	133.95	7,619.7	212.0	474.9	0.21	0.18	-6.07	-677.8	678.5
7,742.0	1.08	132.19	7,713.7	210.8	476.2	0.09	-0.09	-1.87	-700.1	657.3
7,837.0	1.32	121.29	7,808.7	209.6	477.8	0.36	0.27	-11.47	-813.7	512.9
7,931.0	1.58	121.64	7,902.6	208.4	479.8	0.28	0.28	0.37	-812.9	517.9
8,025.0	1.67	122.08	7,996.6	206.9	482.1	0.10	0.10	0.47	-811.6	524.2
8,119.0	1.32	119.00	8,090.6	205.7	484.2	0.38	-0.37	-3.28	-841.1	479.7
8,214.0	1.41	119.09	8,185.5	204.6	486.1	0.09	0.09	0.09	-842.6	481.0
8,308.0	1.23	132.63	8,279.5	203.4	487.9	0.38	-0.19	14.40	-708.7	665.2
8,402.0	1.32	129.46	8,373.5	202.0	489.5	0.12	0.10	-3.37	-746.4	624.9
8,496.0	1.06	136.49	8,467.5	200.7	490.9	0.32	-0.28	7.48	-686.3	711.7
8,591.0	1.14	146.34	8,562.4	199.2	492.0	0.22	0.08	10.37	-536.5	815.3
8,685.0	0.88	147.04	8,656.4	197.9	492.9	0.28	-0.28	0.74	-528.2	821.8
8,780.0	1.06	154.78	8,751.4	196.4	493.7	0.23	0.19	8.15	-414.3	885.6
8,874.0	0.88	153.72	8,845.4	195.0	494.4	0.19	-0.19	-1.13	-432.3	877.8
8,968.0	0.88	159.17	8,939.4	193.7	495.0	0.09	0.00	5.80	-348.4	914.9
9,062.0	0.53	159.08	9,033.4	192.6	495.4	0.37	-0.37	-0.10	-351.0	914.3
9,156.0	0.35	166.38	9,127.4	191.9	495.6	0.20	-0.19	7.77	-232.7	951.6
9,250.0	0.53	149.68	9,221.4	191.3	495.9	0.23	0.19	-17.77	-497.0	844.5
9,345.0	0.62	158.99	9,316.4	190.4	496.3	0.14	0.09	9.80	-354.8	913.9
9,439.0	0.26	149.59	9,410.4	189.8	496.6	0.39	-0.38	-10.00	-500.0	843.6
9,533.0	0.62	356.40	9,504.4	190.1	496.7	0.91	0.38	-162.97	65.5	-978.5
9,627.0	0.88	353.06	9,598.4	191.3	496.6	0.28	0.28	-3.55	121.1	-973.1
9,722.0	1.14	349.72	9,693.3	193.0	496.3	0.28	0.27	-3.52	175.9	-964.4
9,816.0	1.58	352.70	9,787.3	195.2	496.0	0.47	0.47	3.17	123.3	-972.2



Midland PVA

Company:	EOG Resources - Midland
Project:	Lea County, NM (NAD 83 NME)
Well:	Gem 36 State Com
Wellbore:	#504H
Design:	OH
	OH

Local Co-ordinate Reference:	
TVD Reference:	KB = 25 @ 3435.0usft
MD Reference:	KB = 25 @ 3435.0usft
Survey Calculation Method:	Ghd
Database:	EDM
	Minimum Curvature

Survey										
MD	Inc	Azi (azimuth)	TVD	N/S	EW	Dleg	Build	Turn	High to Plan	Right to Plan
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(/100usft)	(/100usft)	(/100usft)	(usft)	(usft)
9,910.0	1.85	350.07	9,881.3	197.9	495.5	0.30	0.29	-2.80	165.0	-965.6
10,004.0	2.20	4.48	9,975.2	201.2	495.4	0.65	0.37	15.33	-83.7	-975.9
10,099.0	1.93	8.70	10,070.2	204.6	495.8	0.33	-0.28	4.44	-158.6	-966.9
10,193.0	2.11	5.62	10,164.1	207.9	496.2	0.22	0.19	-3.28	-109.8	-974.2
10,242.0	2.02	357.10	10,213.1	209.7	496.3	0.65	-0.18	-17.39	33.9	-979.8
10,280.0	0.57	220.00	10,251.1	210.2	496.1	6.50	-3.81	-360.79	642.4	740.4
10,313.0	2.64	193.10	10,284.0	209.3	495.8	6.50	6.27	-81.51	236.8	950.9
10,407.0	14.77	193.97	10,376.8	198.5	492.4	12.90	12.90	0.93	234.8	947.9
10,502.0	18.29	189.05	10,467.9	169.1	487.2	3.98	3.71	-5.18	145.1	960.5
10,595.5	22.39	187.81	10,503.0	156.2	485.3	10.99	10.93	-3.30	121.0	962.0
10,696.0	28.58	186.59	10,554.0	132.1	482.3	10.99	10.95	-2.16	94.8	962.1
10,690.0	41.42	185.62	10,630.8	78.6	476.6	13.67	13.66	-1.03	62.1	959.6
10,784.0	48.54	184.04	10,697.3	12.4	471.1	7.67	7.57	-1.68	28.7	956.3
10,836.5	52.72	183.99	10,730.6	-28.1	468.2	7.96	7.96	-0.10	21.8	954.0
FTP (Gem 36 State Com #504H)										
10,879.0	58.10	183.95	10,755.3	-62.6	465.8	7.96	7.96	-0.09	17.0	952.1
10,973.0	61.38	184.75	10,804.1	-142.6	459.7	5.66	5.62	0.85	19.6	946.6
11,067.0	72.63	183.52	10,840.7	-228.8	453.5	12.03	11.97	-1.31	3.8	941.4
11,149.0	81.25	182.55	10,859.2	-308.5	449.3	10.58	10.51	-1.18	-4.6	937.8
11,257.0	88.11	179.91	10,869.2	-415.9	447.0	6.80	6.35	-2.44	-6.0	936.5
11,351.0	88.29	179.38	10,872.2	-509.9	447.6	0.60	0.19	-0.56	-4.7	937.9
11,445.0	89.16	178.77	10,874.3	-603.9	449.1	1.13	0.93	-0.65	-3.8	940.3
11,539.0	90.48	177.45	10,874.6	-697.8	452.2	1.99	1.40	-1.40	-4.1	944.2
11,568.2	89.94	178.10	10,874.5	-726.9	453.4	2.89	-1.85	2.22	-5.1	945.6
TOT#1(Gem 36 State Com #504H)										



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3435.0usft
Site:	Gem 36 State Com	MD Reference:	KB = 25 @ 3435.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
	11,634.0	88.72	179.56	10,875.3	-792.8	454.7	2.89	-1.85	2.22	-5.7	947.5
	11,728.0	88.02	179.21	10,877.9	-886.7	455.7	0.83	-0.74	-0.37	-5.1	949.4
	11,822.0	88.81	179.30	10,880.5	-980.7	456.9	0.85	0.84	0.10	-3.9	951.5
	11,916.0	87.49	179.56	10,883.6	-1,074.6	457.9	1.43	-1.40	0.28	-2.9	953.2
	12,010.0	87.58	180.35	10,887.6	-1,168.5	457.9	0.85	0.10	0.84	0.0	954.2
	12,104.0	88.99	178.59	10,890.4	-1,262.5	458.8	2.40	1.50	-1.87	0.7	955.9
	12,198.0	88.55	178.15	10,892.4	-1,356.4	461.5	0.66	-0.47	-0.47	0.6	959.4
	12,292.0	88.72	178.15	10,894.7	-1,450.3	464.5	0.18	0.18	0.00	1.2	963.3
	12,386.0	89.34	179.30	10,896.3	-1,544.3	466.6	1.39	0.66	1.22	1.7	966.2
	12,480.0	87.85	179.38	10,898.6	-1,638.3	467.7	1.59	-1.59	0.09	1.8	968.1
	12,574.0	88.55	180.44	10,901.5	-1,732.2	467.8	1.35	0.74	1.13	3.8	969.1
	12,668.0	89.16	180.79	10,903.4	-1,826.2	466.8	0.75	0.65	0.37	4.0	969.0
	12,763.0	90.22	179.47	10,903.9	-1,921.2	466.6	1.78	1.12	-1.39	2.8	969.6
	12,803.6	89.01	180.15	10,904.2	-1,961.7	466.8	3.43	-2.99	1.68	2.2	970.1
TGT#2(Gem 36 State Com #504H)											
	12,857.0	87.41	181.05	10,905.9	-2,015.2	466.2	3.43	-2.99	1.68	3.4	970.0
	12,951.0	88.55	179.12	10,909.2	-2,109.1	466.1	2.38	1.21	-2.05	4.0	970.7
	13,045.0	89.52	178.68	10,910.8	-2,203.1	467.9	1.13	1.03	-0.47	4.3	973.4
	13,139.0	90.57	177.63	10,910.7	-2,297.0	470.9	1.58	1.12	-1.12	3.2	977.2
	13,233.0	88.46	179.56	10,911.5	-2,391.0	473.2	3.04	-2.24	2.05	1.4	980.4
	13,327.0	88.46	179.38	10,914.0	-2,484.9	474.1	0.19	0.00	-0.19	2.2	982.1
	13,421.0	88.64	177.89	10,916.4	-2,578.9	476.3	1.60	0.19	-1.59	2.3	985.2
	13,516.0	90.04	179.12	10,917.5	-2,673.8	478.8	1.96	1.47	1.29	2.8	988.5
	13,610.0	87.85	177.19	10,919.2	-2,767.7	481.8	3.11	-2.33	-2.05	0.7	992.4
	13,704.0	87.32	177.28	10,923.2	-2,861.6	486.3	0.57	-0.56	0.10	2.5	997.8
	13,766.1	86.91	177.97	10,926.3	-2,923.5	488.9	1.30	-0.66	1.12	4.8	1,000.9
TGT#3(Gem 36 State Com #504H)											



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3435.0usft
Site:	Gem 36 State Com	MD Reference:	KB = 25 @ 3435.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
13,798.0	86.70	178.33	10,928.1	-2,955.4	489.9	1.30	-0.66	1.12	6.2	1,002.2
13,893.0	89.16	179.21	10,931.5	-3,050.3	492.0	2.75	2.59	0.93	9.9	1,005.1
13,987.0	90.75	180.53	10,931.6	-3,144.3	492.2	2.20	1.69	1.40	8.9	1,006.2
14,082.0	89.43	179.47	10,931.4	-3,239.3	492.2	1.78	-1.39	-1.12	7.1	1,007.0
14,176.0	90.84	180.09	10,931.2	-3,333.2	492.5	1.64	1.50	0.66	5.8	1,008.2
14,271.0	89.87	179.12	10,930.6	-3,428.2	493.2	1.44	-1.02	-1.02	3.6	1,009.7
14,365.0	91.28	178.95	10,929.7	-3,522.2	494.8	1.51	1.50	-0.18	1.8	1,012.1
14,459.0	89.25	180.79	10,929.2	-3,616.2	495.0	2.91	-2.16	1.96	-0.6	1,013.2
14,553.0	89.25	180.88	10,930.5	-3,710.2	493.6	0.10	0.00	0.10	-0.8	1,012.7
14,647.0	88.29	180.35	10,932.5	-3,804.2	492.6	1.17	-1.02	-0.56	-0.4	1,012.5
14,742.0	88.46	178.77	10,935.2	-3,899.1	493.3	1.67	0.18	-1.66	0.1	1,014.1
14,836.0	89.25	180.26	10,937.1	-3,993.1	494.1	1.79	0.84	1.59	1.4	1,015.7
14,930.0	89.43	178.07	10,938.1	-4,087.1	495.5	2.34	0.19	-2.33	0.6	1,018.0
15,025.0	90.04	179.47	10,938.6	-4,182.0	497.5	1.61	0.64	1.47	0.1	1,020.9
15,150.0	89.08	178.59	10,939.5	-4,307.0	499.7	1.04	-0.77	-0.70	-1.5	1,024.1
15,213.0	89.52	178.68	10,940.3	-4,370.0	501.2	0.71	0.70	0.14	-1.4	1,026.2
15,308.0	90.66	178.59	10,940.2	-4,465.0	503.4	1.20	1.20	-0.09	-2.3	1,029.3
15,402.0	88.72	179.03	10,940.7	-4,558.9	505.4	2.12	-2.06	0.47	-4.2	1,032.1
15,496.0	88.90	177.89	10,942.6	-4,652.9	507.9	1.23	0.19	-1.21	-4.0	1,035.4
15,591.0	89.43	176.48	10,944.0	-4,747.8	512.6	1.59	0.56	-1.48	-3.9	1,041.0
Last MWD Survey (MD=15591.0')										
15,701.0	89.43	176.48	10,945.1	-4,857.5	519.3	0.00	0.00	0.00	-4.5	1,048.7
PBHL (Gem 36 State Com #504H)										
15,748.0	89.43	176.48	10,945.6	-4,904.5	522.2	0.00	0.00	0.00	-4.8	1,052.0
Projection to Bit (MD=15748.0')										



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3435.0usft
Site:	Gem 36 State Com	MD Reference:	KB = 25 @ 3435.0usft
Well:	#504H	North Reference:	.Grid
Wellbore:	OH	Survey Calculation Method:	.Minimum Curvature
Design:	OH	Database:	.EDM

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,280.0	10,251.1	210.2	496.1	KOP, MD:10280.0', TVD:10251.1', N/S:210.2', E/W:496.1', INC:0.57
10,539.5	10,503.0	156.2	485.3	FTP Crossing, MD:10539.5', TVD:10503.0', N/S:156.2', E/W:485.3', INC:22.39
15,591.0	10,944.0	-4,747.8	512.6	Last MWD Survey (MD=15591.0')
15,748.0	10,945.6	-4,904.5	522.2	Projection to Bit (MD=15748.0')

Checked By: _____ Approved By: _____ Date: _____

I certify this survey to be true and correct to the best of my belief and knowledge.

Kay Maddox 12/17/20
Signed Date



Lea County, NM (NAD 83 NME)

Gem 36 State Com #504H

OH

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: #504H

KB = 25 @ 3435.0usft 3410.0
Northing 398497.00 Easting 759823.00 Latitude 32° 5' 36.912 N Longitude 103° 37' 42.421 W

SECTION DETAILS

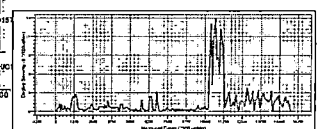
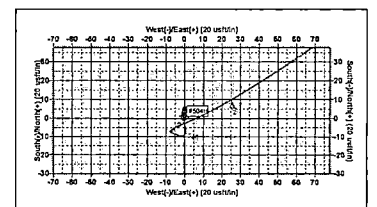
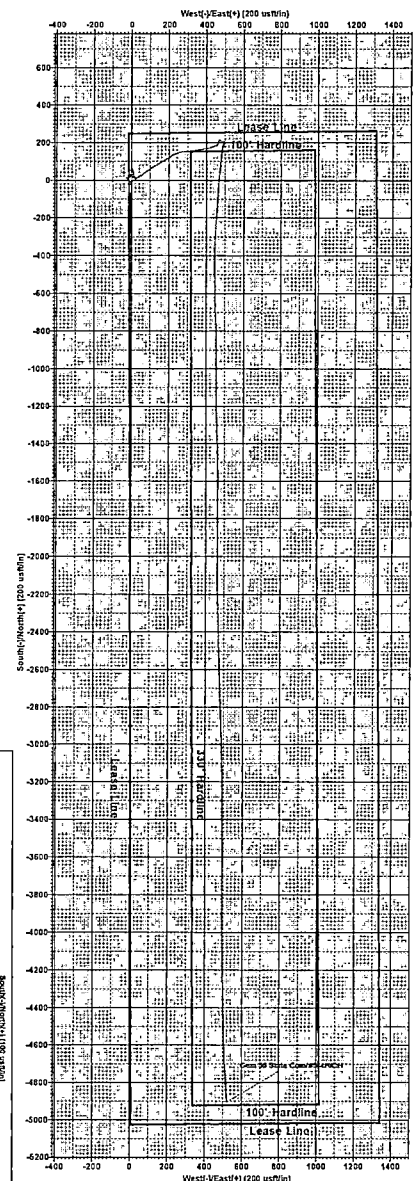
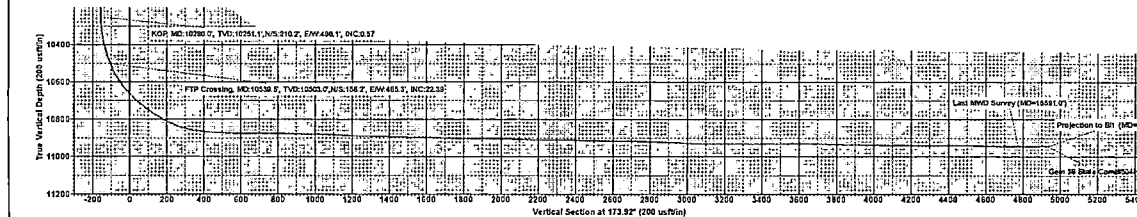
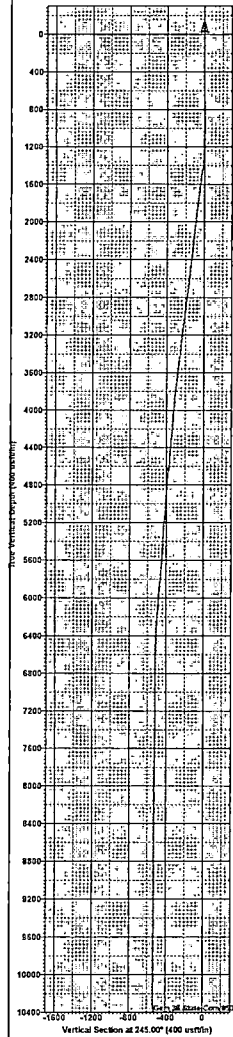
No plan data is available

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
Brushy Top (Gem 36 State Com #504H)	7822.0	194.0	-494.0	398891.00	759139.00
FTP (Gem 36 State Com #504H)	10967.0	144.0	-484.0	398841.00	759139.00
PBHL (Gem 36 State Com #504H)	10950.0	-4922.0	-530.0	393795.00	759093.00
TGT#1 (Gem 36 State Com #504H)	10880.0	-761.6	-492.5	397746.40	759130.50
TGT#2 (Gem 36 State Com #504H)	10962.0	-1857.4	-483.3	395539.60	759119.66
TGT#3 (Gem 36 State Com #504H)	10920.0	-2962.2	-512.4	395534.80	759110.62



LAST DATE: 11/11/2010
BY: 831 Doc: 11/11/2010