



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Getty 5 Fed Com

#504H

OH

Design: OH

Midland PVA

29 September, 2019



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3468.0usft
Site:	Getty 5 Fed Com	MD Reference:	KB = 25 @ 3468.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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 Getty 5 Fed Com			
Site Position:		Northing:	420,163.00 usft
From:	Map	Easting:	772,092.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 9' 10.475 N
		Longitude:	103° 35' 15.736 W
		Grid Convergence:	0.40 °

Well #504H			
Well Position	+N-S 0.0 usft	Northing:	420,206.00 usft
	+E-W 0.0 usft	Easting:	770,882.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 9' 10.984 N
		Longitude:	103° 35' 29.807 W
		Ground Level:	3,443.0 usft

Wellbore OH			
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	12/13/2018	(°)
			6.80
			59.97
			47,740.60589669
			(nT)

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
			(°)
			359.42

Survey Program Date 9/29/2019			
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
177.0	18,528.0	Drilltech MWD (OH)	MWD
			OWSG MWD - Standard



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Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
177.0	0.53	296.81	177.0	0.4	-0.7	0.30	0.30	0.00	-0.8	0.0	
238.0	0.88	279.23	238.0	0.6	-1.4	0.67	0.57	-28.82	-1.5	-0.3	
326.0	1.14	272.64	326.0	0.7	-3.0	0.32	0.30	-7.49	-3.0	-0.6	
417.0	1.06	277.03	417.0	0.9	-4.7	0.13	-0.09	4.82	-4.8	-0.3	
504.0	1.06	258.75	503.9	0.8	-6.3	0.39	0.00	-21.01	-6.0	-2.0	
593.0	0.88	264.46	592.9	0.6	-7.8	0.23	-0.20	6.42	-7.7	-1.3	
680.0	0.97	258.75	679.9	0.4	-9.2	0.15	0.10	-6.56	-8.9	-2.2	
778.0	1.06	247.59	777.9	-0.1	-10.8	0.22	0.09	-11.39	-10.1	-4.0	
872.0	0.88	259.01	871.9	-0.6	-12.4	0.28	-0.19	12.15	-12.2	-1.8	
966.0	0.88	250.14	965.9	-1.0	-13.7	0.14	0.00	-9.44	-13.3	-3.7	
1,061.0	1.41	229.57	1,060.9	-2.0	-15.3	0.70	0.56	-21.65	-13.0	-8.4	
1,116.0	1.14	215.16	1,115.9	-2.9	-16.1	0.76	-0.49	-26.20	-11.7	-11.5	
1,251.0	0.88	203.38	1,250.8	-4.9	-17.3	0.25	-0.19	-8.73	-11.4	-14.0	
1,345.0	0.53	205.93	1,344.8	-6.0	-17.8	0.37	-0.37	2.71	-13.2	-13.4	
1,439.0	0.62	215.77	1,438.8	-6.8	-18.3	0.14	0.10	10.47	-16.2	-10.9	
1,534.0	0.35	192.66	1,533.8	-7.5	-18.7	0.35	-0.28	-24.33	-11.4	-16.6	
1,628.0	1.41	101.69	1,627.8	-8.0	-17.6	1.55	1.13	-96.78	15.6	-11.4	
1,723.0	1.41	94.22	1,722.8	-8.3	-15.3	0.19	0.00	-7.86	14.6	-9.4	
1,817.0	1.32	90.09	1,816.7	-8.4	-13.0	0.14	-0.10	-4.39	13.0	-8.4	
1,911.0	1.14	104.94	1,910.7	-8.7	-11.1	0.39	-0.19	15.80	8.5	-11.2	
2,006.0	1.23	98.44	2,005.7	-9.0	-9.1	0.17	0.09	-6.84	7.7	-10.3	
2,100.0	1.14	68.91	2,099.7	-8.9	-7.3	0.65	-0.10	-31.41	10.0	-5.7	
2,194.0	1.23	73.74	2,193.7	-8.2	-5.4	0.14	0.10	5.14	7.5	-6.4	
2,289.0	1.06	77.17	2,288.6	-7.8	-3.6	0.19	-0.18	3.61	5.2	-6.8	
2,383.0	0.97	49.75	2,382.6	-7.1	-2.1	0.52	-0.10	-29.17	6.2	-4.0	
2,477.0	0.79	57.48	2,476.6	-6.2	-1.0	0.23	-0.19	8.22	4.2	-4.7	



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Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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)	
2,572.0	1.41	90.81	2,571.6	-5.8	0.7	0.91	0.65	34.87	-0.9	-4.9	
2,666.0	2.73	120.67	2,665.5	-7.0	3.8	1.77	1.40	31.98	-4.7	0.2	
2,761.0	4.13	132.63	2,760.4	-10.5	8.3	1.65	1.47	12.59	-6.1	6.6	
2,871.0	4.04	145.99	2,870.1	-16.4	13.4	0.87	-0.08	12.15	-6.1	13.5	
2,949.0	4.57	158.03	2,947.9	-21.5	16.1	1.34	0.68	15.44	-4.0	17.4	
3,044.0	5.98	174.29	3,042.5	-30.0	18.0	2.15	1.48	17.12	-1.1	20.0	
3,138.0	5.54	172.44	3,138.0	-39.3	19.1	0.51	-0.47	-1.97	-4.7	21.1	
3,232.0	5.10	168.31	3,229.6	-47.9	20.5	0.62	-0.47	-4.39	-8.6	22.1	
3,327.0	4.84	172.97	3,324.2	-56.0	21.9	0.51	-0.27	4.91	-8.5	24.3	
3,421.0	5.01	177.63	3,417.9	-64.1	22.5	0.46	0.18	4.96	-8.0	25.9	
3,515.0	4.48	183.95	3,511.6	-71.8	22.4	0.79	-0.56	6.72	-6.3	27.1	
3,609.0	3.87	185.54	3,605.3	-78.7	21.9	0.66	-0.65	1.69	-5.9	27.1	
3,704.0	3.34	187.38	3,700.1	-84.6	21.2	0.57	-0.56	1.94	-4.4	27.0	
3,798.0	2.11	179.58	3,794.0	-89.0	20.9	1.36	-1.31	-8.30	-5.9	26.2	
3,892.0	1.58	173.76	3,888.0	-92.1	21.0	0.60	-0.56	-6.19	-5.0	26.5	
3,986.0	1.49	177.54	3,981.9	-94.6	21.2	0.14	-0.10	4.02	0.7	27.5	
4,080.0	1.06	196.00	4,075.9	-96.6	21.0	0.63	-0.46	19.64	13.8	24.9	
4,175.0	0.79	182.11	4,170.9	-98.1	20.8	0.37	-0.28	-14.62	12.5	27.4	
4,269.0	1.06	149.85	4,264.9	-99.5	21.2	0.61	0.29	-34.32	0.0	33.2	
4,363.0	1.67	121.55	4,358.9	-101.0	22.8	0.95	0.65	-30.11	-14.8	34.6	
4,457.0	1.93	115.49	4,452.8	-102.4	25.4	0.34	0.28	-6.45	-18.9	38.8	
4,551.0	2.29	119.62	4,546.8	-104.0	28.4	0.42	0.38	4.39	-16.6	46.1	
4,645.0	3.08	130.17	4,640.7	-106.6	32.0	0.99	0.84	11.22	-8.3	54.0	
4,739.0	3.69	127.53	4,734.5	-110.0	36.3	0.67	0.65	-2.81	-12.7	58.9	
4,870.0	3.78	123.66	4,865.2	-115.0	43.3	0.20	0.07	-2.95	-20.5	65.5	
5,019.0	3.43	126.21	5,013.9	-120.3	50.9	0.26	-0.23	1.71	-21.4	75.4	
5,113.0	3.96	149.94	5,107.7	-124.8	54.8	1.71	0.56	25.24	10.3	82.4	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
5,207.0	4.40	167.34	5,201.5	-131.1	57.3	1.42	0.47	18.51	34.0	78.4
5,301.0	4.48	191.34	5,295.2	-138.3	57.3	1.96	0.09	25.53	62.4	58.4
5,396.0	5.10	208.30	5,389.9	-145.6	54.6	1.62	0.65	17.85	74.9	36.1
5,490.0	5.01	215.42	5,483.5	-152.6	50.2	0.67	-0.10	7.57	74.2	24.8
5,584.0	4.75	213.49	5,577.2	-159.2	45.7	0.33	-0.28	-2.05	66.4	26.5
5,679.0	4.84	213.05	5,671.8	-165.9	41.3	0.10	0.09	-0.46	58.2	27.0
5,773.0	5.36	227.81	5,765.5	-172.1	35.9	1.50	0.55	15.70	55.0	12.3
5,867.0	5.28	229.48	5,859.1	-177.9	29.4	0.19	-0.09	1.78	46.6	10.8
5,962.0	5.28	245.21	5,953.7	-182.6	22.1	1.52	0.00	16.56	39.2	-1.1
6,056.0	4.40	258.75	6,047.3	-185.1	14.6	1.53	-0.94	14.40	30.0	-9.3
6,150.0	3.34	264.02	6,141.1	-186.1	8.4	1.19	-1.13	5.61	22.7	-11.6
6,244.0	1.93	265.96	6,235.0	-186.5	4.1	1.50	-1.50	2.06	18.0	-12.3
6,339.0	1.41	279.14	6,330.0	-186.4	1.3	0.68	-0.55	13.87	12.0	-15.7
6,433.0	1.41	270.70	6,424.0	-186.2	-1.0	0.22	0.00	-8.98	11.9	-13.9
6,527.0	1.49	283.27	6,517.9	-185.9	-3.3	0.35	0.09	13.37	6.2	-15.9
6,622.0	1.23	284.59	6,612.9	-185.4	-5.5	0.28	-0.27	1.39	3.6	-16.0
6,716.0	0.18	332.14	6,706.9	-185.0	-6.6	1.19	-1.12	50.59	-10.3	-12.7
6,811.0	0.18	263.50	6,801.9	-184.9	-6.8	0.21	0.00	-72.25	7.9	-14.3
6,905.0	0.18	318.16	6,895.9	-184.8	-7.0	0.18	0.00	58.15	-7.4	-14.6
6,999.0	0.09	343.12	6,989.9	-184.6	-7.1	0.11	-0.10	26.55	-13.0	-10.1
7,093.0	0.26	233.70	7,083.9	-184.7	-7.3	0.32	0.18	-116.40	13.7	-9.0
7,187.0	0.26	32.87	7,177.9	-184.6	-7.4	0.54	0.00	169.33	-16.0	3.6
7,281.0	0.35	8.26	7,271.9	-184.1	-7.2	0.17	0.10	-26.18	-16.5	-3.4
7,376.0	0.18	42.54	7,366.9	-183.7	-7.1	0.24	-0.18	36.08	-16.0	6.6
7,470.0	0.09	154.69	7,460.9	-183.7	-7.0	0.24	-0.10	119.31	12.2	12.4
7,564.0	0.09	272.90	7,554.9	-183.8	-7.0	0.16	0.00	125.76	5.2	-16.5
7,659.0	0.18	225.88	7,649.9	-183.9	-7.2	0.14	0.09	-49.49	15.4	-7.5



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Site: Getty 5 Fed Com			MD Reference:			KB = 25 @ 3468.0usft				
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Wellbore: OH			Survey Calculation Method:			Minimum Curvature				
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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)
7,753.0	0.62	226.32	7,743.9	-184.3	-7.7	0.47	0.47	0.47	14.7	-7.7
7,847.0	0.53	241.87	7,837.9	-184.9	-8.4	0.19	-0.10	16.54	11.2	-11.2
7,942.0	0.53	225.18	7,932.9	-185.4	-9.1	0.16	0.00	-17.57	13.1	-7.6
8,036.0	0.79	221.22	8,026.9	-186.2	-9.8	0.28	0.28	-4.21	12.5	-6.7
8,130.0	0.79	232.56	8,120.9	-187.1	-10.8	0.17	0.00	12.06	9.6	-8.9
8,224.0	1.06	219.64	8,214.8	-188.1	-11.9	0.36	0.29	-13.74	9.9	-6.7
8,319.0	1.14	206.54	8,309.8	-189.6	-12.8	0.28	0.08	-13.79	9.3	-4.5
8,413.0	1.06	213.33	8,403.8	-191.2	-13.7	0.17	-0.09	7.86	6.9	-5.5
8,507.0	1.32	202.76	8,497.8	-192.9	-14.6	0.37	0.28	-11.88	5.9	-4.3
8,601.0	1.23	205.22	8,591.8	-194.8	-15.5	0.11	-0.10	2.62	3.6	-4.5
8,696.0	1.32	204.35	8,686.7	-196.8	-16.4	0.10	0.09	-0.92	1.6	-4.4
8,790.0	1.23	214.63	8,780.7	-198.6	-17.4	0.26	-0.10	10.94	-1.3	-4.4
8,884.0	1.32	212.87	8,874.7	-200.3	-18.6	0.10	0.10	-1.87	-3.3	-4.5
8,978.0	1.32	205.31	8,968.7	-202.2	-19.6	0.19	0.00	-8.04	-4.8	-5.0
9,072.0	1.49	218.23	9,062.6	-204.1	-20.8	0.38	0.18	13.74	-8.1	-3.6
9,167.0	1.23	222.19	9,157.6	-205.9	-22.3	0.29	-0.27	4.17	-10.6	-2.9
9,261.0	1.06	243.98	9,251.6	-207.0	-23.7	0.49	-0.18	23.18	-12.7	1.6
9,355.0	1.49	255.23	9,345.6	-207.7	-25.7	0.53	0.46	11.97	-14.2	4.2
9,449.0	1.85	255.41	9,439.5	-208.4	-28.3	0.38	0.38	0.19	-17.0	4.2
9,544.0	1.58	280.28	9,534.5	-208.5	-31.1	0.83	-0.28	26.18	-16.3	11.6
9,638.0	0.70	306.03	9,628.5	-208.0	-32.9	1.06	-0.94	27.39	-11.4	18.1
9,732.0	0.62	1.85	9,722.5	-207.1	-33.3	0.66	-0.09	59.38	7.8	20.1
9,826.0	0.35	16.00	9,816.5	-206.3	-33.2	0.31	-0.29	15.05	11.7	17.7
9,920.0	0.62	112.76	9,910.5	-206.3	-32.7	0.79	0.29	102.94	15.7	-13.4
10,014.0	0.53	100.55	10,004.5	-206.5	-31.8	0.16	-0.10	-12.99	17.3	-9.9
10,109.0	0.18	77.87	10,099.5	-206.6	-31.2	0.39	-0.37	-23.87	19.2	-2.6
10,203.0	0.18	4.57	10,193.5	-206.4	-31.0	0.23	0.00	-77.98	7.8	17.5



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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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)
10,297.0	0.53	348.31	10,287.5	-205.8	-31.1	0.38	0.37	-17.30	2.0	18.9
10,366.0	0.26	344.53	10,356.5	-205.4	-31.2	0.39	-0.39	-5.48	0.3	19.0
10,411.0	0.44	10.72	10,401.5	-205.1	-31.2	0.53	0.40	58.20	8.4	16.9
10,425.0	1.49	11.28	10,415.5	-204.9	-31.2	7.47	7.47	3.97	8.3	16.9
KOP, MD:10425.0, TVD:10415.5, N/S:-204.9, E/W:-31.2, INC:1.49										
10,464.0	4.40	11.43	10,454.4	-202.9	-30.8	7.47	7.47	0.40	6.4	16.8
10,505.0	9.15	2.46	10,495.1	-198.1	-30.3	11.83	11.59	-21.88	0.7	17.3
10,598.0	19.08	354.29	10,585.2	-175.5	-31.5	10.86	10.68	-8.78	-9.5	17.6
10,666.3	25.09	353.60	10,648.4	-150.0	-34.2	8.81	8.80	-1.01	-15.3	19.5
FTP Crossing, MD:10666.3, TVD:10648.4, N/S:-150.0, E/W:-34.2, INC:25.09										
10,693.0	27.44	353.41	10,672.4	-138.3	-35.6	8.81	8.80	-0.72	-17.3	20.5
10,787.0	33.77	354.99	10,753.3	-90.7	-40.4	6.79	6.73	1.68	-20.3	25.2
10,881.0	45.29	1.23	10,825.7	-31.0	-41.9	12.95	12.26	6.64	-20.2	28.0
10,975.0	53.02	5.19	10,887.1	39.9	-37.8	8.82	8.22	4.21	-21.4	24.1
11,070.0	58.83	2.55	10,940.3	118.3	-32.6	6.53	6.12	-2.78	-19.2	17.5
11,164.0	69.12	1.05	10,981.5	202.7	-30.0	11.04	10.95	-1.60	-13.8	13.8
11,258.0	77.56	0.09	11,008.4	292.6	-29.1	9.03	8.98	-1.02	-7.8	12.1
11,284.0	80.72	0.00	11,013.3	318.2	-29.1	12.16	12.15	-0.35	-6.0	11.9
11,351.0	87.32	359.91	11,020.3	384.8	-29.1	9.85	9.85	-0.13	-1.6	11.4
11,445.0	85.56	0.70	11,026.1	478.6	-28.6	2.05	-1.87	0.84	4.5	10.1
11,540.0	84.33	3.34	11,034.5	573.1	-25.3	3.06	-1.29	2.78	13.1	6.0
11,634.0	87.32	2.46	11,041.4	666.7	-20.5	3.32	3.18	-0.94	20.2	0.5
11,728.0	90.84	359.82	11,042.9	760.7	-18.7	4.68	3.74	-2.81	21.9	-2.1
11,823.0	90.22	359.65	11,042.0	855.7	-19.1	0.68	-0.65	-0.18	21.3	-2.5
11,917.0	91.36	0.09	11,040.7	949.7	-19.3	1.30	1.21	0.47	20.3	-3.0
12,011.0	91.19	0.26	11,038.6	1,043.6	-19.0	0.26	-0.18	0.18	18.4	-4.0
12,105.0	91.01	0.35	11,036.8	1,137.6	-18.5	0.21	-0.19	0.10	16.9	-5.3



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3468.0usft
Site:	Getty 5 Fed Com	MD Reference:	KB = 25 @ 3468.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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)
	12,199.0	90.75	0.79	11,035.4	1,231.6	-17.6	0.54	-0.28	0.47	15.7	-7.0
	12,294.0	90.31	0.88	11,034.5	1,326.6	-16.2	0.47	-0.46	0.09	15.0	-9.2
	12,388.0	89.69	0.53	11,034.5	1,420.6	-15.1	0.76	-0.66	-0.37	15.3	-11.1
	12,482.0	90.57	358.86	11,034.3	1,514.6	-15.6	2.01	0.94	-1.78	15.3	-11.3
	12,576.0	89.96	358.51	11,033.8	1,608.6	-17.7	0.75	-0.65	-0.37	15.1	-9.9
	12,671.0	89.25	358.42	11,034.5	1,703.5	-20.3	0.75	-0.75	-0.09	16.0	-8.2
	12,765.0	91.89	357.63	11,033.5	1,797.5	-23.5	2.93	2.81	-0.84	15.4	-5.7
	12,859.0	91.45	357.36	11,030.8	1,891.3	-27.6	0.55	-0.47	-0.29	12.9	-2.4
	12,954.0	91.19	357.45	11,028.6	1,986.2	-31.9	0.29	-0.27	0.09	10.9	1.2
	13,048.0	90.84	357.28	11,027.0	2,080.1	-36.2	0.41	-0.37	-0.18	9.5	4.7
	13,142.0	90.48	357.19	11,025.9	2,174.0	-40.8	0.39	-0.38	-0.10	8.7	8.5
	13,236.0	90.57	359.38	11,025.0	2,267.9	-43.6	2.33	0.10	2.33	8.1	10.6
	13,331.0	89.87	358.68	11,024.6	2,362.9	-45.2	1.04	-0.74	-0.74	8.0	11.4
	13,425.0	89.16	358.42	11,025.4	2,456.9	-47.6	0.80	-0.76	-0.28	9.0	13.0
	13,519.0	91.45	0.88	11,024.9	2,550.9	-48.1	3.58	2.44	2.62	8.7	12.8
	13,613.0	92.59	2.55	11,021.6	2,644.7	-45.3	2.15	1.21	1.78	5.7	9.3
	13,707.0	90.57	0.61	11,019.0	2,738.7	-42.7	2.98	-2.15	-2.08	3.3	5.9
	13,802.0	89.34	0.26	11,019.1	2,833.7	-42.0	1.35	-1.29	-0.37	3.7	4.4
	13,896.0	88.90	0.09	11,020.6	2,927.7	-41.7	0.50	-0.47	-0.18	5.4	3.4
	13,989.0	88.55	359.47	11,022.6	3,020.6	-42.1	0.77	-0.38	-0.67	7.6	3.0
	14,084.0	88.20	359.56	11,025.3	3,115.6	-42.9	0.38	-0.37	0.09	10.3	3.0
	14,178.0	88.02	359.21	11,028.4	3,209.5	-43.9	0.42	-0.19	-0.37	13.3	3.2
	14,272.0	90.40	359.03	11,029.7	3,303.5	-45.3	2.54	2.53	-0.19	14.5	3.9
	14,367.0	91.10	358.77	11,028.5	3,398.5	-47.2	0.79	0.74	-0.27	13.2	5.0
	14,461.0	90.75	358.42	11,027.0	3,492.4	-49.5	0.53	-0.37	-0.37	11.6	6.5
	14,555.0	91.01	358.24	11,025.5	3,586.4	-52.2	0.34	0.28	-0.19	10.1	8.5
	14,650.0	89.69	359.12	11,024.9	3,681.4	-54.4	1.67	-1.39	0.93	9.5	9.9



Midland PVA

Company: Project: Site: Well: Wellbore: Design:			EOG Resources - Midland Lea County, NM (NAD 83 NME) Gally 5 Fed Com #504H OH OH			Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:					Well #504H KB = 25 @ 3468.0usft KB = 25 @ 3468.0usft Grid Minimum Curvature EDM 5000.14				
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D Leg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)					
14,744.0	89.52	358.77	11,025.6	3,775.3	-58.1	0.41	-0.18	-0.37	10.1	10.9					
14,839.0	89.34	358.68	11,026.5	3,870.3	-58.2	0.21	-0.19	-0.09	10.9	12.2					
14,933.0	88.64	358.24	11,028.2	3,964.3	-60.8	0.88	-0.74	-0.47	12.5	14.0					
15,027.0	88.72	359.74	11,030.3	4,058.2	-62.4	1.60	0.09	1.60	14.6	14.9					
15,121.0	88.64	359.21	11,032.5	4,152.2	-63.3	0.57	-0.09	-0.56	16.7	15.0					
15,215.0	90.04	358.68	11,033.6	4,246.2	-65.0	1.59	1.49	-0.56	17.8	16.0					
15,309.0	89.87	358.68	11,033.7	4,340.1	-67.2	0.18	-0.18	0.00	17.8	17.4					
15,403.0	89.69	358.51	11,034.0	4,434.1	-69.5	0.26	-0.19	-0.18	18.1	18.9					
15,498.0	90.57	0.53	11,033.8	4,529.1	-70.3	2.32	0.93	2.13	17.6	18.9					
15,592.0	91.71	1.49	11,031.9	4,623.1	-68.6	1.59	1.21	1.02	14.9	16.5					
15,686.0	91.54	1.05	11,029.3	4,717.0	-66.5	0.50	-0.18	-0.47	11.3	13.7					
15,781.0	91.36	1.05	11,026.9	4,812.0	-64.8	0.19	-0.19	0.00	8.0	11.2					
15,875.0	91.19	0.88	11,024.8	4,905.9	-63.2	0.26	-0.18	-0.18	5.1	8.8					
15,970.0	89.25	1.23	11,024.4	5,000.9	-61.5	2.08	-2.04	0.37	3.8	6.3					
16,064.0	88.90	1.14	11,025.9	5,094.9	-59.5	0.38	-0.37	-0.10	4.4	3.6					
16,158.0	88.55	1.49	11,028.0	5,188.8	-57.4	0.53	-0.37	0.37	5.7	0.7					
16,252.0	88.11	0.70	11,030.8	5,282.8	-55.6	0.96	-0.47	-0.84	7.5	-1.9					
16,346.0	90.04	0.44	11,032.3	5,376.7	-54.6	2.07	2.05	-0.28	8.1	-3.6					
16,440.0	90.13	0.09	11,032.1	5,470.7	-54.2	0.38	0.10	-0.37	7.1	-4.8					
16,535.0	89.78	0.26	11,032.2	5,565.7	-53.9	0.41	-0.37	0.18	6.3	-5.8					
16,629.0	89.16	0.00	11,033.1	5,659.7	-53.7	0.72	-0.66	-0.28	6.3	-6.8					
16,723.0	88.55	359.47	11,035.0	5,753.7	-54.1	0.86	-0.65	-0.56	7.3	-7.2					
16,817.0	90.13	359.47	11,036.0	5,847.7	-55.0	1.68	1.68	0.00	7.5	-7.0					
16,911.0	90.31	359.56	11,035.7	5,941.7	-55.8	0.21	0.19	0.10	6.2	-7.0					
17,005.0	90.40	359.38	11,035.1	6,035.7	-56.7	0.21	0.10	-0.19	5.0	-6.9					
17,099.0	90.31	358.68	11,034.5	6,129.7	-58.3	0.75	-0.10	-0.74	4.3	-6.1					
17,193.0	89.78	358.51	11,034.4	6,223.6	-60.6	0.59	-0.56	-0.18	4.1	-4.5					



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3468.0usft
Site:	Getty 5 Fed Com	MD Reference:	KB = 25 @ 3468.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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)
17,288.0	89.78	357.63	11,034.8	6,318.6	-63.8	0.93	0.00	-0.93	4.3	-2.1
17,382.0	89.43	358.86	11,035.5	6,412.5	-66.6	1.36	-0.37	1.31	4.9	0.0
17,476.0	88.81	357.71	11,036.9	6,508.5	-69.5	1.39	-0.66	-1.22	6.2	2.0
17,571.0	88.90	358.77	11,038.8	6,601.4	-72.4	1.12	0.09	1.12	8.0	4.2
17,665.0	91.01	358.07	11,038.9	6,695.4	-75.0	2.36	2.24	-0.74	7.9	6.0
17,759.0	91.36	358.07	11,036.9	6,789.3	-78.1	0.37	0.37	0.00	5.9	8.4
17,854.0	91.10	358.24	11,034.9	6,884.2	-81.2	0.33	-0.27	0.18	3.7	10.7
17,948.0	89.43	357.19	11,034.5	6,978.1	-84.9	2.10	-1.78	-1.12	3.2	13.7
18,042.0	90.40	359.03	11,034.6	7,072.1	-88.0	2.21	1.03	1.96	3.2	16.0
18,136.0	90.04	0.18	11,034.2	7,166.1	-88.7	1.28	-0.38	1.22	2.7	15.9
18,231.0	89.60	359.38	11,034.5	7,261.1	-89.0	0.96	-0.46	-0.84	2.9	15.5
18,330.0	88.90	359.38	11,035.8	7,360.1	-90.1	0.71	-0.71	0.00	4.1	15.7
Last MWD Survey (MD=18330.0')										
18,528.0	88.90	359.38	11,039.6	7,558.0	-92.3	0.00	0.00	0.00	7.6	16.3
Projection to Bit (MD=18528.0')										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		N/S (usft)	E/W (usft)	
10,425.0	10,415.5	-204.9	-31.2	KOP, MD:10425.0', TVD:10415.5', N/S:-204.9', E/W:-31.2', INC:1.49
10,666.3	10,648.4	-150.0	-34.2	FTP Crossing, MD:10666.3', TVD:10648.4', N/S:-150.0', E/W:-34.2', INC:25.09
18,330.0	11,035.8	7,360.1	-90.1	Last MWD Survey (MD=18330.0')
18,528.0	11,039.6	7,558.0	-92.3	Projection to Bit (MD=18528.0')

Checked By: _____	Approved By: _____	Date: _____
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Lea County, NM (NAD 83 NME)

Getty 5 Fed Com #504H

Plan #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: #504H

KB = 26 @ 3468.6usft 3443.0
Northing 420206.00 Easting 770882.00 Latitude 32° 9' 10.994 N Longitude 103° 35' 29.807 W



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.40°

Magnetic Field
Strength: 47740.6nT
Dip Angle: 59.97°
Date: 12/13/2018
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.40°
To convert a Magnetic Direction to a True Direction, Add 6.80° East
To convert a True Direction to a Grid Direction, Subtract 0.39°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSecl	Target
1	0.0	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.0	
2	2500.0	6.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	
3	2700.1	4.00	183.72	2699.9	-7.0	-0.5	2.00	183.72	-7.0	
4	5371.7	4.00	183.72	5365.1	-193.0	-12.5	0.00	0.00	-192.9	
5	5571.8	0.00	359.56	5565.0	-200.0	-13.0	2.00	180.00	-199.9	
6	10455.3	0.00	359.56	10449.0	-200.0	-13.0	0.00	359.56	-199.9	
7	11357.4	30.15	359.54	11022.0	374.5	-17.7	10.00	359.54	374.6	
8	13982.8	90.15	359.54	11015.0	2999.8	-39.0	0.00	0.00	3000.0	TGT#1 (Getty 5 FC #504H)
9	13992.3	89.96	359.54	11015.0	3009.3	-39.0	2.00	180.00	3009.6	
10	15482.7	89.96	359.54	11016.0	4499.7	-51.1	0.00	0.00	4500.0	TGT#2 (Getty 5 FC #504H)
11	15507.8	89.46	359.54	11016.1	4524.7	-51.3	2.00	-180.00	4525.0	
12	16982.9	89.46	359.54	11030.0	5999.7	-63.3	0.00	0.00	6000.0	TGT#3 (Getty 5 FC #504H)
13	17006.3	89.93	359.53	11030.1	6023.1	-63.5	2.00	-0.37	6023.5	
14	18541.2	89.93	359.53	11032.0	7558.0	-76.0	0.00	0.00	7558.4	PBHL (Getty 5 FC #504H)

CASING DETAILS
No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
TGT#1 (Getty 5 FC #504H)	11015.0	2999.8	-39.0	423205.80	770843.05
TGT#2 (Getty 5 FC #504H)	11015.0	4499.7	-51.1	424705.70	770830.88
TGT#3 (Getty 5 FC #504H)	11010.0	5999.7	-63.3	423205.70	770818.72
PBHL (Getty 5 FC #504H)	11032.0	7558.0	-76.0	427764.00	770906.00
Brushy Top (Getty 5 FC #504H)	7561.0	-200.0	-13.0	420006.00	770889.00
FTP (Getty 5 FC #504H)	11022.0	-100.0	-13.0	420056.00	770869.00

