



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Neptune 10 State Com

#201H

OH

Design: OH

Midland PVA

01 May, 2019

HOBBS OCD
JUL 26 2019
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Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #201H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3640.0usft
Site:	Neptune 10 State Corn	MD Reference:	KB = 25 @ 3640.0usft
Well:	#201H	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	Neptune 10 State Corn		
Site Position:		Northing:	446,557.00 usft
From:	Map	Easting:	778,984.00 usft
Position Uncertainty:	0.0 usft	Grid Radius:	13-3/16 "
		Latitude:	32° 13' 31.172 N
		Longitude:	103° 33' 53.609 W
		Grid Convergence:	0.41 °

Well	#201H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 13' 33.120 N
		Longitude:	103° 34' 3.174 W
		Ground Level:	3,615.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
			Dip Angle
			(°)
			Field Strength
			(nT)
	IGRF2015	8/27/2018	6.82
			60.05
			47,815.41570025

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
			(°)
			1.88

Survey Program	Date	5/1/2019		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
175.0	19,890.0	Drilltech MWD (OH)	MWD	OWSG MWD - Standard



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 Database: EDM 5000.14

Survey

MD (usft)	Inc (°)	Asl (azimuth) (°)	TVD (usft)	NS (usft)	EW (usft)	DLag (°/100usft)	Bulld (°/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
175.0	0.30	115.50	175.0	-0.2	0.4	0.17	0.17	0.00	-0.5	0.0
234.0	0.26	142.29	234.0	-0.4	0.6	0.23	-0.07	45.41	-0.7	0.3
324.0	0.35	211.81	324.0	-0.8	0.6	0.40	0.10	77.24	-0.3	0.9
415.0	0.40	212.10	415.0	-1.3	0.3	0.05	0.05	0.32	-0.9	0.9
505.0	0.60	217.60	505.0	-1.9	-0.2	0.23	0.22	6.11	-1.6	1.0
603.0	0.60	218.10	603.0	-2.7	-0.8	0.01	0.00	0.51	-2.6	1.1
698.0	0.40	249.10	698.0	-3.2	-1.4	0.35	-0.21	32.83	-2.5	2.5
792.0	0.70	265.40	792.0	-3.4	-2.3	0.36	0.32	17.34	-2.5	3.2
887.0	0.80	252.00	887.0	-3.7	-3.6	0.29	0.21	-14.11	-4.5	2.4
981.0	1.00	254.90	981.0	-4.1	-5.1	0.12	0.11	3.08	-6.0	2.7
1,075.0	1.30	249.20	1,074.9	-4.7	-6.9	0.34	0.32	-6.06	-8.1	2.0
1,170.0	1.30	246.90	1,169.9	-5.5	-8.8	0.05	0.00	-2.42	-10.3	1.6
1,264.0	1.80	250.10	1,263.9	-6.4	-11.2	0.54	0.53	3.40	-13.0	1.6
1,358.0	1.70	254.60	1,357.8	-7.3	-14.0	0.18	-0.11	4.79	-17.2	-0.8
1,456.0	1.70	253.20	1,455.8	-8.1	-16.7	0.04	0.00	-1.43	-23.0	-7.5
1,550.0	1.10	130.20	1,549.8	-9.1	-17.4	2.64	-0.64	-130.85	27.9	-14.9
1,645.0	3.10	117.50	1,644.7	-10.9	-14.4	2.15	2.11	-13.37	36.1	-4.9
1,739.0	5.10	123.80	1,738.5	-14.4	-8.7	2.18	2.13	6.70	37.9	-5.9
1,833.0	5.80	129.40	1,832.0	-19.7	-1.5	0.93	0.74	5.96	37.8	-7.5
1,928.0	5.30	128.10	1,926.6	-25.5	5.6	0.54	-0.53	-1.37	38.3	-4.8
2,022.0	6.00	128.70	2,020.1	-31.2	12.9	0.75	0.74	0.84	38.5	-3.3
2,117.0	6.80	129.80	2,114.5	-37.9	21.1	0.85	0.84	1.16	37.5	-2.3
2,211.0	5.90	128.80	2,208.0	-44.5	29.1	0.96	-0.96	-1.06	38.6	0.0
2,306.0	5.00	127.20	2,302.5	-50.1	36.2	0.96	-0.95	-1.68	37.1	3.0
2,400.0	5.50	136.00	2,396.1	-55.8	42.6	1.01	0.53	9.36	38.2	-1.5
2,495.0	6.50	144.00	2,490.6	-63.4	48.9	1.37	1.05	8.42	37.5	-6.9



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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 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)
2,589.0	6.80	146.40	2,584.0	-72.4	55.1	0.43	0.32	2.55	35.9	-9.4
2,683.0	7.80	150.90	2,677.2	-82.4	61.2	1.04	0.85	4.79	32.8	-13.6
2,778.0	6.90	149.40	2,771.5	-92.8	67.2	0.78	-0.74	-1.58	30.7	-14.6
2,872.0	6.30	147.70	2,864.9	-102.0	72.8	0.67	-0.64	-1.81	29.9	-15.2
2,967.0	5.80	147.40	2,959.3	-110.5	78.2	0.53	-0.53	-0.32	29.7	-16.4
3,061.0	6.30	144.90	3,052.8	-118.7	83.7	0.60	0.53	-2.66	30.1	-18.3
3,158.0	7.50	143.70	3,147.1	-128.0	90.4	1.27	1.28	-1.28	28.7	-18.4
3,249.0	6.80	141.90	3,239.4	-137.2	97.4	0.78	-0.75	-1.94	27.2	-16.1
3,344.0	6.00	141.20	3,333.8	-145.5	104.0	0.85	-0.84	-0.74	26.5	-16.1
3,438.0	6.30	137.30	3,427.3	-153.1	110.5	0.55	0.32	-4.15	27.2	-14.3
3,531.0	8.00	137.40	3,519.5	-161.6	118.4	1.83	1.83	0.11	25.1	-14.0
3,625.0	7.20	136.30	3,612.7	-170.7	126.9	0.86	-0.85	-1.17	22.6	-13.1
3,720.0	6.20	139.10	3,707.1	-178.9	134.3	1.11	-1.05	2.95	20.6	-13.6
3,814.0	6.60	140.80	3,800.5	-188.9	141.1	0.47	0.43	1.81	19.4	-14.4
3,908.0	7.60	142.60	3,893.8	-196.0	148.3	1.09	1.06	1.91	18.9	-15.4
4,003.0	6.20	140.70	3,988.1	-205.0	155.3	1.49	-1.47	-2.00	15.8	-15.2
4,097.0	5.70	140.80	4,081.6	-212.5	161.5	0.53	-0.53	0.11	15.7	-15.5
4,191.0	4.80	139.10	4,175.2	-219.1	167.0	0.97	-0.96	-1.81	17.2	-15.1
4,285.0	5.30	134.40	4,268.8	-225.1	172.7	0.69	0.53	-5.00	19.7	-13.1
4,379.0	5.90	132.50	4,362.3	-231.4	179.4	0.67	0.64	-2.02	20.6	-11.4
4,474.0	5.50	130.60	4,456.9	-237.7	188.4	0.47	-0.42	-2.00	21.1	-8.3
4,568.0	5.60	129.00	4,550.4	-243.5	193.4	0.20	0.11	-1.70	21.8	-7.1
4,662.0	5.10	126.40	4,644.0	-248.9	200.3	0.59	-0.53	-2.77	22.8	-4.1
4,757.0	6.40	125.60	4,738.5	-254.5	208.0	1.37	1.37	-0.84	22.8	-1.5
4,851.0	8.40	124.70	4,831.8	-261.4	217.9	2.13	2.13	-0.96	20.0	1.2
4,946.0	8.50	124.00	4,925.7	-269.3	229.5	0.15	0.11	-0.74	15.4	4.0
5,079.0	7.10	123.30	5,057.5	-279.3	244.5	1.06	-1.05	-0.53	10.4	7.9



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5,215.0	5.60	123.60	5,192.7	-287.8	257.0	1.10	-1.10	0.22	7.8	11.3
5,309.0	5.20	124.80	5,286.2	-292.6	264.4	0.44	-0.43	1.28	4.1	12.6
5,403.0	5.10	122.90	5,379.9	-297.3	271.4	0.21	-0.11	-2.02	-2.6	13.2
5,498.0	3.30	117.20	5,474.6	-300.6	277.3	1.94	-1.89	-6.00	-10.8	12.5
5,592.0	2.50	118.90	5,568.5	-303.0	281.5	0.86	-0.85	1.81	-15.2	12.9
5,686.0	0.60	109.60	5,662.4	-304.2	283.8	2.03	-2.02	-9.89	-19.6	10.0
5,781.0	0.40	307.30	5,757.4	-304.2	284.0	1.04	-0.21	-170.84	15.8	-15.6
5,875.0	0.40	310.30	5,851.4	-303.8	283.5	0.02	0.00	3.19	14.3	-16.4
5,969.0	0.40	306.90	5,945.4	-303.3	283.0	0.03	0.00	-3.62	14.6	-15.5
6,064.0	0.40	310.50	6,040.4	-302.9	282.5	0.03	0.00	3.79	12.9	-16.4
6,158.0	0.40	293.00	6,134.4	-302.6	281.9	0.13	0.00	-18.62	16.6	-11.8
6,253.0	0.40	316.80	6,229.4	-302.2	281.4	0.17	0.00	25.05	9.8	-17.4
6,347.0	0.50	310.20	6,323.4	-301.7	280.8	0.12	0.11	-7.02	11.0	-16.2
6,442.0	0.50	298.30	6,418.4	-301.2	280.2	0.11	0.00	-12.53	13.3	-13.7
6,536.0	0.40	306.70	6,512.4	-300.9	279.5	0.13	-0.11	8.94	10.4	-15.4
6,630.0	0.40	288.30	6,606.4	-300.6	279.0	0.14	0.00	-19.57	14.1	-11.4
6,725.0	0.60	295.00	6,701.4	-300.2	278.2	0.22	0.21	7.05	11.8	-13.0
6,819.0	0.60	282.90	6,795.4	-299.9	277.3	0.13	0.00	-12.87	13.3	-10.3
6,913.0	0.50	300.30	6,889.4	-299.6	276.4	0.21	-0.11	18.51	8.7	-13.7
7,008.0	0.70	295.90	6,984.4	-299.1	275.6	0.22	0.21	-4.63	8.8	-13.0
7,102.0	0.50	283.50	7,078.4	-298.8	274.6	0.25	-0.21	-13.19	10.4	-10.9
7,196.0	0.50	281.30	7,172.4	-298.6	273.8	0.02	0.00	-2.34	10.0	-10.5
7,291.0	0.60	283.70	7,267.4	-298.4	273.0	0.11	0.11	2.53	8.6	-10.9
7,385.0	0.60	271.60	7,361.4	-298.3	272.0	0.13	0.00	-12.87	9.7	-9.0
7,479.0	0.60	260.40	7,455.4	-298.4	271.0	0.12	0.00	-11.91	10.3	-7.0
7,573.0	0.90	250.30	7,549.4	-298.7	269.8	0.35	0.32	-10.74	10.2	-5.2
7,668.0	1.00	243.40	7,644.4	-299.3	268.4	0.16	0.11	-7.26	9.2	-4.0



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7,762.0	0.80	223.40	7,738.3	-300.2	287.1	0.37	-0.11	-21.28	8.5	-0.9	
7,856.0	1.10	213.80	7,832.3	-301.5	286.1	0.28	0.21	-10.21	6.9	0.4	
7,950.0	0.70	209.40	7,926.3	-302.8	285.4	0.43	-0.43	-4.68	5.3	0.8	
8,045.0	0.70	209.30	8,021.3	-303.8	284.8	0.00	0.00	-0.11	4.2	0.8	
8,139.0	0.80	205.40	8,115.3	-304.7	284.3	0.12	-0.11	-4.15	3.0	1.1	
8,233.0	0.50	197.30	8,209.3	-305.8	284.0	0.13	-0.11	-8.82	2.0	1.4	
8,327.0	0.80	198.20	8,303.3	-306.4	283.7	0.11	0.11	0.96	1.1	1.4	
8,421.0	0.80	182.10	8,397.3	-307.5	283.5	0.30	0.21	-17.13	-0.5	1.5	
8,515.0	0.70	180.00	8,491.3	-308.8	283.4	0.15	-0.11	8.40	-1.5	1.7	
8,610.0	0.80	186.20	8,586.3	-309.8	283.2	0.11	-0.11	-4.00	-2.7	1.5	
8,704.0	0.70	199.50	8,680.3	-310.9	283.0	0.19	0.11	14.15	-3.3	2.2	
8,798.0	0.60	200.20	8,774.3	-311.9	282.6	0.11	-0.11	0.74	-4.3	2.3	
8,893.0	0.60	192.90	8,869.3	-312.8	282.3	0.08	0.00	-7.68	-5.6	1.6	
8,987.0	0.80	183.80	8,963.2	-313.9	282.1	0.21	0.21	0.86	-6.7	1.7	
9,081.0	0.50	185.70	9,057.2	-315.0	281.9	0.33	-0.32	-8.62	-7.9	0.7	
9,176.0	0.60	198.40	9,152.2	-315.9	281.7	0.17	0.11	13.37	-8.5	2.5	
9,264.0	0.50	223.50	9,240.2	-316.8	281.3	0.29	-0.11	28.52	-7.4	6.1	
9,347.0	0.40	179.20	9,323.2	-317.1	281.0	0.42	-0.12	-53.37	-10.1	-1.1	
9,382.0	0.40	208.50	9,358.2	-317.4	281.0	0.58	0.00	83.71	-8.6	4.0	
9,428.0	2.90	20.40	9,405.2	-316.4	281.3	7.01	5.32	385.74	9.0	-2.6	
9,477.0	7.10	17.90	9,453.0	-312.4	282.6	8.78	8.75	-5.21	6.7	-2.5	
9,524.0	12.80	15.60	9,499.3	-304.6	284.9	12.15	12.13	-4.89	4.2	-2.8	
9,571.0	18.20	18.00	9,544.6	-292.6	288.8	11.57	11.49	5.11	0.7	-3.8	
9,618.0	22.70	-18.30	9,588.6	-277.0	273.7	9.58	9.57	0.84	-2.9	-5.5	
9,665.0	26.30	18.40	9,631.4	-258.5	279.9	7.66	7.66	0.21	-6.1	-7.6	
9,712.0	30.70	21.50	9,672.7	-237.5	287.5	9.87	9.36	8.60	-8.1	-10.5	
9,759.0	35.30	19.80	9,712.1	-213.5	286.5	9.98	9.79	-3.62	-11.2	-14.8	



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9,808.0	40.30	15.40	9,749.2	-186.1	305.2	12.08	10.84	-9.36	-12.4	-18.6	
9,854.0	44.80	12.80	9,784.6	-154.7	313.1	9.87	8.96	-5.42	-13.9	-20.7	
9,901.0	50.10	12.00	9,816.4	-120.9	320.5	11.77	11.70	-1.70	-15.8	-21.7	
9,948.0	54.90	13.00	9,845.0	-84.5	328.5	10.35	10.21	2.13	-18.4	-22.5	
9,995.0	59.00	13.60	9,870.7	-46.2	337.6	8.78	8.72	1.28	-20.6	-24.0	
10,042.0	63.90	12.80	9,893.1	-6.0	347.0	10.53	10.43	-1.70	-22.1	-25.7	
10,089.0	67.30	11.10	9,912.5	35.9	355.9	7.95	7.23	-3.62	-23.0	-26.7	
10,137.0	69.40	9.10	9,930.2	79.8	363.7	5.84	4.37	-4.17	-22.0	-26.3	
10,184.0	72.00	8.00	9,945.8	123.8	370.3	5.98	5.53	-2.34	-19.2	-24.4	
10,231.0	74.80	6.10	9,959.2	168.3	375.8	7.11	5.98	-4.04	-14.7	-21.3	
10,278.0	78.50	5.10	9,968.7	213.9	380.3	10.21	10.00	-2.13	-9.5	-18.9	
10,326.0	84.10	4.40	9,976.5	261.3	384.2	9.69	9.58	-1.46	-4.3	-11.6	
10,373.0	87.80	3.40	9,979.8	308.0	387.4	8.15	7.87	-2.13	-1.6	-6.4	
10,420.0	88.30	2.80	9,981.4	354.8	389.9	1.66	1.06	-1.28	-0.5	-1.3	
10,514.0	89.30	2.40	9,983.4	448.8	394.2	1.15	1.06	-0.43	0.4	7.4	
10,608.0	90.00	2.10	9,984.0	542.7	397.9	0.81	0.74	-0.32	0.0	13.6	
10,703.0	90.50	1.60	9,983.5	637.7	400.9	0.74	0.53	-0.53	-1.5	17.4	
10,797.0	90.60	1.80	9,982.6	731.6	403.7	0.24	0.11	0.21	-3.4	18.3	
10,891.0	90.70	1.60	9,981.6	825.6	406.5	0.24	0.11	-0.21	-5.6	16.1	
10,888.0	90.80	1.20	9,980.3	920.6	408.8	0.43	0.11	-0.42	-7.9	11.7	
11,080.0	89.40	1.30	9,980.2	1,014.5	410.9	1.49	-1.49	0.11	-8.1	7.3	
11,174.0	88.80	1.00	9,981.6	1,108.5	412.8	0.71	-0.64	-0.32	-8.6	3.1	
11,269.0	89.40	1.50	9,983.1	1,203.5	414.9	0.82	0.63	0.53	-8.2	-1.3	
11,362.0	89.10	1.30	9,984.4	1,298.4	417.1	0.39	-0.32	-0.22	-8.0	-5.9	
11,456.0	89.50	359.10	9,985.5	1,390.4	417.5	2.38	0.43	-2.34	-7.9	-8.5	
11,551.0	90.10	358.90	9,985.8	1,485.4	415.8	0.87	0.63	-0.21	-8.6	-9.2	
11,645.0	90.20	358.40	9,985.6	1,579.4	413.6	0.54	0.11	-0.53	-9.9	-9.3	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Neptune 10 State Com
 Well: #201H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #201H
 TVD Reference: KB = 25 @ 3640.0usft
 MD Reference: KB = 25 @ 3640.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Asl (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
11,739.0	91.30	357.80	9,984.4	1,673.3	410.5	1.33	1.17	-0.84	-12.2	-8.6	
11,834.0	89.50	359.30	9,983.7	1,768.3	408.1	2.47	-1.89	1.58	-13.9	-8.5	
11,828.0	88.80	359.00	9,984.3	1,862.3	406.7	0.45	0.32	-0.32	-14.3	-9.4	
12,022.0	90.30	358.70	9,984.2	1,956.2	404.8	0.62	0.53	-0.32	-15.5	-9.9	
12,117.0	89.70	359.80	9,984.2	2,051.2	403.5	1.32	-0.63	1.16	-16.2	-10.4	
12,211.0	90.90	359.40	9,983.7	2,145.2	402.9	1.35	1.28	-0.43	-16.9	-10.4	
12,305.0	89.00	0.00	9,983.8	2,239.2	402.4	2.12	-2.02	0.64	-17.1	-10.6	
12,400.0	89.70	359.60	9,984.9	2,334.2	402.1	0.85	0.74	-0.42	-16.2	-11.0	
12,494.0	88.10	359.10	9,986.7	2,428.2	401.0	1.78	-1.70	-0.53	-14.6	-10.7	
12,588.0	89.30	359.60	9,988.8	2,522.2	399.9	1.38	1.28	0.53	-12.7	-10.3	
12,682.0	89.90	359.20	9,989.5	2,616.1	398.9	0.77	0.64	-0.43	-12.3	-10.0	
12,777.0	86.50	358.90	9,992.4	2,711.1	397.4	3.59	-3.58	-0.32	-9.5	-9.2	
12,871.0	87.10	358.50	9,997.7	2,804.9	395.2	0.77	0.64	-0.43	-4.5	-7.8	
12,965.0	88.50	358.50	10,001.3	2,898.8	392.8	1.49	1.49	0.00	-1.1	-6.0	
13,060.0	90.50	358.40	10,002.1	2,993.8	390.2	2.11	2.11	-0.11	-0.5	-4.2	
13,155.0	91.20	358.70	10,000.7	3,088.7	387.8	0.80	0.74	0.32	-2.1	-2.5	
13,249.0	91.60	357.90	9,998.4	3,182.6	385.0	0.95	0.43	-0.85	-4.7	-0.4	
13,343.0	90.00	358.10	9,997.1	3,276.6	381.7	1.72	-1.70	0.21	-6.2	2.2	
13,437.0	90.60	358.30	9,996.8	3,370.5	378.8	0.67	0.64	0.21	-6.9	4.4	
13,531.0	91.10	357.70	9,995.2	3,464.5	375.5	0.83	0.53	-0.64	-8.5	7.0	
13,626.0	89.80	359.60	9,994.5	3,559.4	373.2	2.34	-1.37	1.89	-9.5	8.6	
13,720.0	90.10	359.20	9,994.6	3,653.4	372.1	0.45	0.32	-0.32	-9.6	8.9	
13,815.0	90.60	358.50	9,994.0	3,748.4	370.2	0.91	0.53	-0.74	-10.5	10.1	
13,909.0	90.20	0.90	9,993.3	3,842.4	369.7	2.59	-0.43	2.55	-11.3	9.9	
14,003.0	90.60	0.40	9,992.7	3,936.4	370.8	0.68	0.43	-0.53	-12.2	8.1	
14,098.0	89.40	1.60	9,992.7	4,031.3	372.6	1.94	-1.28	1.47	-12.5	5.6	
14,192.0	89.50	1.60	9,993.6	4,125.3	375.4	0.24	0.11	-0.21	-11.8	2.1	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Neptune 10 State Com
 Well: #201H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #201H
 TVD Reference: KB = 25 @ 3640.0usft
 MD Reference: KB = 25 @ 3640.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Asl (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
14,287.0	90.00	1.40	9,994.0	4,220.3	377.9	0.57	0.53	-0.21	-11.7	-1.2	
14,381.0	90.90	1.50	9,993.2	4,314.2	380.3	0.96	0.96	0.11	-12.7	-4.3	
14,478.0	90.30	0.80	9,992.2	4,409.2	382.2	0.97	-0.63	-0.74	-13.9	-8.9	
14,570.0	91.80	0.20	9,990.5	4,503.2	383.0	1.72	1.60	-0.64	-15.9	-8.5	
14,664.0	90.00	1.10	9,989.0	4,597.2	384.1	2.14	-1.91	0.96	-17.6	-10.3	
14,758.0	88.90	0.70	9,989.9	4,691.1	385.5	1.25	-1.17	-0.43	-17.0	-12.5	
14,853.0	89.90	1.00	9,990.9	4,786.1	386.9	1.10	1.05	0.32	-18.3	-14.8	
14,947.0	90.90	1.00	9,990.3	4,880.1	388.6	1.06	1.06	0.00	-17.2	-17.0	
15,041.0	89.30	359.80	9,990.1	4,974.1	389.3	2.07	-1.70	-1.17	-17.6	-18.5	
15,136.0	90.00	359.50	9,990.7	5,069.1	388.8	0.85	0.74	-0.42	-17.3	-18.7	
15,230.0	91.10	359.00	9,989.8	5,163.1	387.6	1.29	1.17	-0.53	-18.4	-18.2	
15,324.0	89.90	359.20	9,989.0	5,257.1	388.1	1.29	-1.28	0.21	-19.5	-17.5	
15,418.0	90.40	358.50	9,988.7	5,351.1	384.2	0.92	0.53	-0.74	-20.0	-16.3	
15,513.0	88.90	359.20	9,989.3	5,446.0	382.3	1.74	-1.58	0.74	-19.7	-15.1	
15,607.0	90.00	359.70	9,990.2	5,540.0	381.4	1.29	1.17	0.53	-19.0	-15.0	
15,702.0	88.20	359.50	9,991.7	5,635.0	380.8	1.91	-1.89	-0.21	-17.8	-15.1	
15,796.0	88.40	359.40	9,994.5	5,729.0	379.9	0.24	0.21	-0.11	-15.3	-14.9	
15,890.0	89.30	358.70	9,996.4	5,822.9	378.3	1.21	0.96	-0.74	-13.7	-14.1	
15,985.0	90.70	359.30	9,996.4	5,917.9	376.6	1.60	1.47	0.63	-13.9	-13.1	
16,079.0	89.50	359.20	9,996.2	6,011.9	375.4	1.28	-1.28	-0.11	-14.3	-12.6	
16,174.0	87.20	358.80	9,999.0	6,106.8	373.6	2.46	-2.42	-0.42	-11.9	-11.7	
16,268.0	88.20	358.40	10,002.7	6,200.7	371.5	1.15	1.06	-0.43	-8.3	-10.2	
16,368.0	89.70	359.10	10,004.9	6,320.7	368.8	1.38	1.25	0.58	-6.5	-6.5	
16,482.0	89.90	359.00	10,005.3	6,414.7	367.3	0.24	0.21	-0.11	-6.4	-7.6	
16,576.0	90.00	358.90	10,005.3	6,508.6	365.6	0.15	0.11	-0.11	-6.6	-6.7	
16,671.0	90.60	358.20	10,004.8	6,603.6	363.2	0.97	0.63	-0.74	-7.3	-5.0	
16,766.0	90.00	358.00	10,004.3	6,698.6	360.0	0.67	-0.63	-0.21	-8.1	-2.6	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Neptune 10 State Com
 Well: #201H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #201H
 TVD Reference: KB = 25 @ 3640.0usft
 MD Reference: KB = 25 @ 3640.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 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)
16,860.0	90.00	358.00	10,004.3	8,792.5	358.7	0.00	0.00	0.00	-8.4	0.0
16,954.0	90.00	357.60	10,004.3	8,886.4	353.1	0.43	0.00	-0.43	-8.8	2.8
17,048.0	90.00	357.50	10,004.3	8,980.3	349.1	0.11	0.00	-0.11	-8.9	6.1
17,143.0	90.10	357.00	10,004.3	7,075.2	344.5	0.54	0.11	-0.53	-9.2	9.9
17,237.0	90.10	356.90	10,004.1	7,169.1	339.5	0.11	0.00	-0.11	-9.7	14.2
17,331.0	90.30	359.10	10,003.8	7,263.0	336.3	2.35	0.21	2.34	-10.2	16.8
17,425.0	90.90	359.80	10,002.8	7,357.0	335.4	0.98	0.84	0.74	-11.5	16.9
17,519.0	91.60	0.00	10,000.7	7,451.0	335.2	0.77	0.74	0.21	-13.8	16.4
17,614.0	89.30	359.80	10,000.0	7,546.0	335.0	2.43	-2.42	-0.21	-14.8	15.8
17,708.0	89.80	359.70	10,000.7	7,640.0	334.6	0.54	0.53	-0.11	-14.3	15.5
17,802.0	90.50	359.70	10,000.5	7,734.0	334.1	0.74	0.74	0.00	-14.8	15.2
17,897.0	90.60	359.50	9,998.8	7,829.0	333.5	0.24	0.11	-0.21	-16.0	15.2
17,991.0	90.80	359.60	9,998.4	7,923.0	332.7	0.24	0.21	0.11	-17.4	15.2
18,086.0	91.10	358.80	9,998.8	8,017.9	331.4	0.90	0.32	-0.84	-19.1	15.8
18,180.0	89.10	359.90	9,998.7	8,111.9	330.3	2.43	-2.13	1.17	-18.9	16.1
18,274.0	89.50	359.80	9,997.8	8,205.9	330.1	0.44	0.43	-0.11	-17.4	15.8
18,368.0	90.10	359.50	9,998.2	8,299.9	329.5	0.71	0.64	-0.32	-16.7	15.4
18,463.0	90.60	359.00	9,997.6	8,394.9	328.3	0.74	0.53	-0.53	-16.9	15.9
18,557.0	90.70	358.90	9,996.5	8,488.9	328.5	0.15	0.11	-0.11	-17.6	16.9
18,651.0	91.40	358.50	9,994.8	8,582.9	324.4	0.88	0.74	-0.43	-19.0	18.3
18,746.0	90.00	359.90	9,993.8	8,677.8	323.1	2.08	-1.47	1.47	-19.8	18.9
18,840.0	89.50	359.40	9,994.0	8,771.8	322.5	0.75	-0.53	-0.53	-19.0	18.8
18,935.0	89.00	358.90	9,995.3	8,866.8	321.1	0.74	-0.53	-0.53	-17.4	19.4
19,029.0	88.80	359.10	9,997.0	8,960.8	319.5	0.24	-0.11	0.21	-15.3	20.3
19,123.0	89.70	358.60	9,998.1	9,054.8	317.6	1.00	0.85	-0.53	-13.8	21.5
19,217.0	89.30	1.00	9,999.0	9,148.7	317.3	2.59	-0.43	2.55	-12.6	21.1
19,312.0	89.70	1.20	9,999.8	9,243.7	319.1	0.47	0.42	0.21	-11.5	18.5



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #201H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3640.0usft
Site:	Neptune 10 State Com	MD Reference:	KB = 25 @ 3640.0usft
Well:	#201H	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)	DLag ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
19,408.0	89.80	1.30	10,000.2	9,337.7	321.1	0.15	0.11	0.11	-10.7	15.7
19,500.0	89.80	1.40	10,000.5	9,431.7	323.3	0.11	0.00	0.11	-10.0	12.8
19,594.0	89.60	0.80	10,001.0	9,525.7	325.1	0.67	-0.21	-0.64	-9.1	10.3
19,689.0	89.30	1.30	10,001.9	9,620.6	328.9	0.61	-0.32	0.53	-7.9	7.8
19,783.0	89.60	2.10	10,002.8	9,714.6	329.7	0.91	0.32	0.85	-6.6	4.3
19,827.0	90.00	2.10	10,003.0	9,758.6	331.3	0.91	0.91	0.00	-6.3	2.3
19,890.0	90.00	2.10	10,003.0	9,821.5	333.6	0.00	0.00	0.00	-6.0	-0.5

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
9,398.0	9,374.2	-317.3	261.0	KOP, MD:9398.0', TVD:9374.2', N/S:-317.3', E/W:261.0', INC:0.73
9,636.6	9,605.7	-270.0	276.0	FTP Crossing, MD:9636.6', TVD:9605.7', N/S:-270.0', E/W:276.0', INC:24.12
19,827.0	10,003.0	9,758.6	331.3	Last MWD Survey (MD=19827.0')
19,890.0	10,003.0	9,821.5	333.6	Projection to Bit (MD=19890.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Neptune 10 State Com

#201H

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

To convert a Magnetic Direction to a Grid Direction, Add 6.41°
To convert a Magnetic Direction to a True Direction, Add 6.82° East
To convert a True Direction to a Grid Direction, Subtract 6.41°

WELL DETAILS: #201H

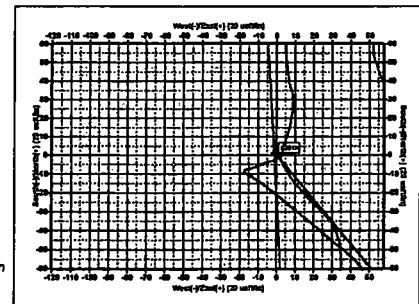
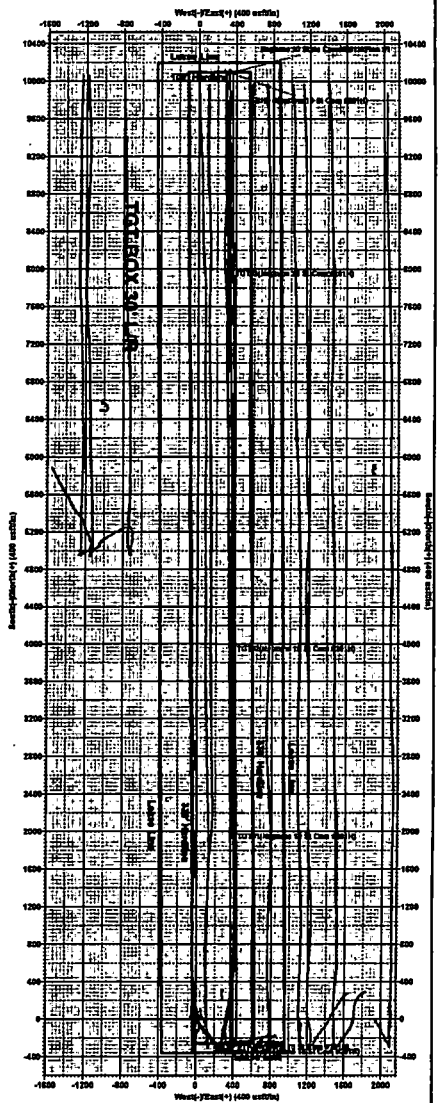
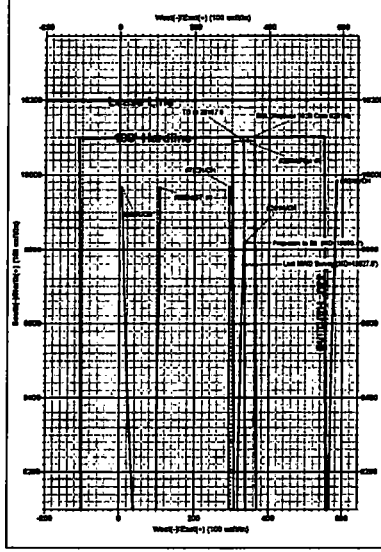
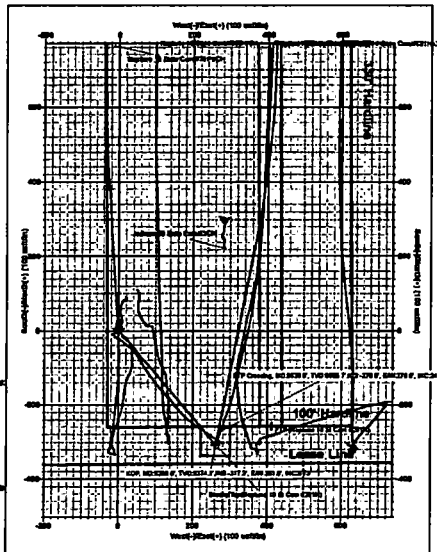
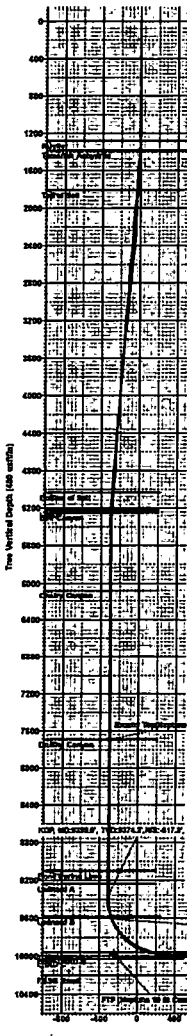
3615.0
KB = 25 @ 3640.00
Northing 448748.00 Easting 778141.00
Latitude 32° 17' 33.120 N Longitude 103° 34' 3.174 W
Spot

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dieg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1495.1	5.90	139.52	1494.5	-11.5	9.9	2.00	139.52	-11.2	
4	5125.2	5.90	139.52	5105.5	-295.5	252.1	0.00	0.00	-287.0	
5	5420.3	0.00	0.00	5400.0	-307.0	282.0	2.00	180.00	-298.2	
6	9428.1	0.00	0.00	9407.8	-307.0	282.0	0.00	0.00	-298.2	
7	10321.8	89.37	11.00	9980.7	249.2	370.1	10.00	11.00	261.2	
8	10942.6	89.37	358.58	9987.6	866.7	421.9	2.00	-90.09	880.0	
9	12084.5	89.37	358.58	10000.0	1988.1	394.1	0.00	0.00	2000.0	TGT#1(Neptune 10 St Com #201H)
10	12119.6	89.88	358.57	10000.4	2043.3	393.2	2.00	63.21	2055.0	
11	14066.1	89.88	359.57	10005.0	3989.7	378.5	0.00	0.00	4000.0	TGT#2(Neptune 10 St Com #201H)
12	14087.4	89.84	359.55	10005.0	3991.0	378.5	2.00	-147.33	4001.2	
13	18069.5	89.84	359.55	10016.0	7992.9	347.3	0.00	0.00	8000.0	TGT#3(Neptune 10 St Com #201H)
14	18088.4	90.22	359.55	10016.0	8011.8	347.2	2.00	0.00	8018.9	
15	20167.6	90.22	359.55	10008.0	10091.0	331.0	0.00	0.00	10098.4	BHL (Neptune 10 St Com #201H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Brushy Top(Neptune 10 St Com #201H)	7885.0	-307.0	282.0	448441.80	778403.00	Polygon
FTF(Neptune 10 St Com #201H)	8378.0	-251.0	412.0	448481.00	778533.00	Point
TGT#1(Neptune 10 St Com #201H)	10000.0	168.1	394.1	448738.10	778336.12	Point
TGT#2(Neptune 10 St Com #201H)	10005.0	388.7	378.5	450737.70	778316.83	Point
BHL (Neptune 10 St Com #201H)	10008.0	10091.0	331.0	450833.00	778472.00	Rectangle (Sides: L0.0 W60.0)
TGT#3(Neptune 10 St Com #201H)	10018.0	782.8	347.3	454740.90	778488.34	Point



Lea County, NM (NAD 83 NME)