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HOBS OGD

EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Neptune 10 State Com

#202H

OH

Design: OH

Midland PVA

14 April, 2019



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #202H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3635.0usft (hp)
Site:	Neptune 10 State Com	MD Reference:	KB = 25 @ 3635.0usft (hp)
Well:	#202H	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 Com		
Site Position:		Northing:	446,557.00 usft
From:	Map	Easting:	778,964.00 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	#202H		
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' 31.885 N
		Longitude:	103° 33' 51.962 W
		Ground Level:	3,610.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	8/27/2016	6.82
			Dip Angle
			60.05
			Field Strength
			47,815.57098455

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
			1.39

Survey Program	Date 4/14/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
139.0	20,156.0	Prodirectional MWD (OH)	MWD
			Description
			OWSG MWD - Standard



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Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	NS (usft)	EW (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
139.0	0.30	155.60	139.0	-0.3	0.2	0.22	0.22	0.00	-0.4	0.0	
308.0	0.60	260.10	308.0	-0.6	-0.5	0.43	0.18	61.83	-0.7	0.8	
481.0	1.20	265.70	481.0	-1.2	-3.2	0.35	0.35	3.24	-3.3	0.9	
576.0	1.70	258.80	575.9	-1.5	-5.6	0.56	0.53	-7.26	-5.6	0.4	
670.0	1.90	251.00	669.9	-2.3	-8.5	0.34	0.21	-8.30	-8.7	-0.6	
765.0	2.80	250.40	764.8	-3.6	-12.1	0.85	0.85	-0.63	-12.6	-0.7	
859.0	3.10	238.50	858.7	-5.7	-16.5	0.72	0.32	-12.66	-17.0	-3.7	
953.0	3.00	230.00	952.6	-8.6	-20.5	0.49	-0.11	-9.04	-21.2	-6.6	
1,048.0	2.30	229.70	1,047.5	-11.4	-23.9	0.74	-0.74	-0.32	-25.6	-6.7	
1,078.0	2.00	204.10	1,077.4	-12.3	-24.5	3.32	-1.00	-85.33	-21.2	-17.4	
1,111.0	1.90	190.60	1,110.4	-13.4	-24.9	1.42	-0.30	-40.91	-17.7	-22.0	
1,142.0	1.90	172.60	1,141.4	-14.4	-24.9	1.92	0.00	-56.06	-11.0	-26.6	
1,236.0	2.90	136.20	1,235.3	-17.6	-23.1	1.89	1.06	-38.72	3.4	-28.9	
1,330.0	3.20	136.60	1,329.2	-21.3	-19.6	0.32	0.32	0.43	0.8	-29.9	
1,372.0	2.90	132.80	1,371.1	-22.8	-18.0	0.86	-0.71	-9.05	2.7	-30.5	
1,515.0	3.50	122.10	1,513.9	-27.6	-11.7	0.59	0.42	-7.48	12.4	-31.3	
1,609.0	6.20	108.70	1,607.6	-30.8	-4.4	3.10	2.87	-14.26	21.3	-26.9	
1,703.0	7.00	105.70	1,700.9	-33.9	5.9	0.93	0.85	-3.19	21.6	-24.2	
1,798.0	6.50	106.50	1,795.3	-37.0	16.6	0.54	-0.53	0.84	20.0	-22.7	
1,892.0	5.80	107.90	1,889.7	-40.0	26.2	0.76	-0.74	1.49	19.3	-21.6	
1,987.0	6.40	104.40	1,983.2	-42.8	35.9	0.74	0.63	-3.68	20.3	-18.6	
2,081.0	7.40	100.70	2,076.5	-45.2	47.0	1.16	1.06	-3.94	19.7	-14.8	
2,176.0	6.80	99.30	2,170.8	-47.3	58.5	0.66	-0.63	-1.47	18.0	-11.6	
2,270.0	6.20	98.40	2,264.2	-48.7	69.1	0.73	-0.64	-3.09	17.3	-7.6	
2,364.0	6.50	95.30	2,357.6	-49.8	79.4	0.34	0.32	-1.17	16.3	-3.8	
2,459.0	7.10	96.30	2,451.9	-50.9	90.8	0.64	0.63	1.05	14.4	-0.5	



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Survey											
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2,553.0	7.30	102.40	2,545.2	-52.9	102.2	0.84	0.21	6.49	12.2	1.0	
2,648.0	7.40	106.80	2,639.4	-55.9	113.9	0.60	0.11	4.63	10.0	2.2	
2,743.0	7.80	114.80	2,733.6	-60.4	125.7	1.19	0.42	8.42	7.8	1.9	
2,837.0	8.10	121.10	2,826.7	-66.5	137.1	0.98	0.32	6.70	4.9	1.0	
2,931.0	7.80	121.00	2,919.8	-73.1	148.1	0.53	-0.53	-0.11	1.9	0.2	
3,026.0	7.10	120.90	3,014.0	-79.4	158.5	0.63	-0.53	-0.11	-0.2	-0.6	
3,120.0	6.50	120.20	3,107.4	-85.0	168.1	0.64	-0.64	-0.74	-1.4	-1.4	
3,215.0	5.80	121.00	3,201.8	-90.2	178.9	0.74	-0.74	0.84	-1.6	-2.1	
3,309.0	5.30	120.70	3,295.4	-94.9	184.7	0.53	-0.53	-0.32	-0.7	-2.9	
3,404.0	5.50	115.30	3,390.0	-99.0	192.6	0.57	0.21	-5.68	0.7	-3.2	
3,498.0	6.00	111.70	3,483.5	-102.8	201.2	0.66	0.53	-3.83	1.4	-2.6	
3,593.0	5.50	108.80	3,578.0	-106.1	210.1	0.61	-0.53	-3.05	2.0	-1.4	
3,687.0	5.80	106.40	3,671.5	-108.9	219.0	0.41	0.32	-2.55	2.8	0.2	
3,781.0	5.70	106.30	3,765.1	-111.5	228.0	0.11	-0.11	-0.11	3.0	1.9	
3,876.0	6.20	102.80	3,859.8	-114.0	237.5	0.65	0.53	-3.68	2.8	4.2	
3,971.0	6.50	101.50	3,954.0	-116.2	247.8	0.35	0.32	-1.37	2.0	6.7	
4,065.0	5.70	101.70	4,047.4	-118.2	257.8	0.85	-0.85	0.21	1.6	9.2	
4,159.0	6.40	114.20	4,140.9	-121.3	268.9	1.58	0.74	13.30	3.7	10.1	
4,254.0	7.00	119.90	4,235.3	-126.4	278.8	0.94	0.63	6.00	3.7	9.6	
4,348.0	5.80	115.30	4,328.7	-131.2	286.0	1.39	-1.28	-4.89	2.4	9.5	
4,442.0	5.80	114.50	4,422.2	-135.2	294.7	0.09	0.00	-0.85	2.7	9.8	
4,536.0	6.60	119.00	4,515.7	-139.8	303.7	1.00	0.85	4.79	3.3	9.5	
4,631.0	6.50	120.00	4,610.0	-145.2	313.1	0.16	-0.11	1.05	2.7	8.9	
4,725.0	5.80	120.20	4,703.5	-150.2	321.8	0.75	-0.74	0.21	2.6	8.3	
4,819.0	6.00	121.70	4,797.0	-155.2	330.1	0.27	0.21	1.60	3.0	7.4	
4,914.0	6.20	123.80	4,891.5	-160.7	338.6	0.32	0.21	2.21	3.2	6.2	
5,008.0	6.30	124.00	4,984.9	-166.4	347.1	0.11	0.11	0.21	2.8	4.8	



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5,076.0	5.50	124.20	5,052.5	-170.3	352.9	1.18	-1.18	0.29	3.0	3.9
5,128.0	4.80	123.50	5,104.3	-172.9	356.8	1.35	-1.35	-1.35	3.2	3.3
5,191.0	4.30	122.50	5,167.1	-175.6	361.0	0.80	-0.79	-1.59	2.8	2.8
5,285.0	3.80	121.80	5,260.9	-179.1	366.6	0.53	-0.53	-0.74	0.5	2.3
5,379.0	2.80	124.00	5,354.7	-182.1	371.1	1.07	-1.08	2.34	-3.5	2.3
5,474.0	2.00	116.70	5,449.7	-184.1	374.5	0.90	-0.84	-7.68	-7.7	1.5
5,568.0	2.00	113.40	5,543.6	-185.5	377.5	0.12	0.00	-3.51	-11.0	1.0
5,663.0	1.50	110.60	5,638.6	-186.6	380.2	0.53	-0.53	-2.95	-14.0	0.3
5,757.0	1.30	98.50	5,732.5	-187.2	382.4	0.38	-0.21	-12.87	-16.0	-2.9
5,851.0	0.20	149.00	5,826.5	-187.5	383.5	1.28	-1.17	53.72	-13.2	11.4
5,946.0	0.50	267.40	5,921.5	-187.6	383.2	0.65	0.32	124.63	15.9	6.4
6,041.0	0.40	271.30	6,016.5	-187.7	382.5	0.11	-0.11	4.11	15.6	5.3
6,135.0	0.40	288.40	6,110.5	-187.6	381.8	0.11	0.00	16.06	15.8	1.1
6,229.0	0.40	288.30	6,204.5	-187.4	381.2	0.01	0.00	2.02	15.2	0.6
6,324.0	0.50	269.00	6,299.5	-187.3	380.5	0.19	0.11	-20.32	13.4	5.5
6,419.0	0.40	279.50	6,394.5	-187.2	379.7	0.14	-0.11	11.05	13.4	3.0
6,513.0	0.60	266.50	6,488.5	-187.2	378.9	0.24	0.21	-13.83	11.6	5.9
6,607.0	0.40	250.80	6,582.5	-187.3	378.1	0.26	-0.21	-16.70	8.7	8.7
6,702.0	0.40	275.50	6,677.5	-187.4	377.5	0.18	0.00	26.00	10.9	4.4
6,796.0	0.60	272.10	6,771.5	-187.4	376.7	0.22	0.21	-3.62	9.8	5.0
6,890.0	0.50	271.30	6,865.5	-187.3	375.8	0.11	-0.11	-0.85	8.9	5.1
6,985.0	0.50	259.40	6,960.5	-187.4	374.9	0.11	0.00	-12.53	6.8	6.8
7,079.0	0.60	276.00	7,054.5	-187.4	374.0	0.20	0.11	17.66	7.6	4.7
7,173.0	0.60	262.50	7,148.5	-187.4	373.1	0.15	0.00	-14.36	5.3	6.2
7,268.0	0.90	269.10	7,243.5	-187.5	371.8	0.33	0.32	6.95	4.7	5.6
7,362.0	0.70	269.70	7,337.5	-187.5	370.5	0.21	-0.21	0.64	3.5	5.5
7,456.0	0.50	112.30	7,431.5	-187.7	370.3	1.25	-0.21	-167.45	-5.2	-4.0



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7,551.0	1.20	113.00	7,526.4	-188.2	371.6	0.74	0.74	0.74	-6.7	-3.9
7,645.0	1.50	124.70	7,620.4	-189.3	373.5	0.43	0.32	12.45	-9.5	-2.3
7,739.0	1.70	128.40	7,714.4	-190.9	375.6	0.24	0.21	3.84	-12.3	-1.6
7,834.0	1.20	126.90	7,809.4	-192.4	377.5	0.53	-0.53	-1.58	-14.6	-2.0
7,928.0	1.20	116.70	7,903.3	-193.4	379.2	0.23	0.00	-10.85	-16.0	-4.7
8,023.0	1.20	107.30	7,998.3	-194.1	381.0	0.21	0.00	-9.89	-17.0	-7.4
8,117.0	1.40	117.30	8,092.3	-194.9	383.0	0.32	0.21	10.84	-20.2	-4.2
8,211.0	1.20	122.50	8,186.3	-196.0	384.8	0.25	-0.21	5.53	-22.6	-2.2
8,305.0	1.10	122.50	8,280.2	-197.0	386.4	0.11	-0.11	0.00	-24.5	-2.2
8,399.0	1.10	133.20	8,374.2	-198.1	387.9	0.22	0.00	11.38	-26.2	2.5
8,494.0	1.30	147.50	8,469.2	-199.7	389.1	0.38	0.21	15.05	-26.8	9.2
8,589.0	1.50	155.50	8,564.2	-201.7	390.2	0.29	0.21	8.42	-27.5	12.9
8,683.0	1.40	157.80	8,658.1	-203.9	391.1	0.12	-0.11	2.45	-28.4	14.1
8,777.0	1.50	168.70	8,752.1	-206.1	391.8	0.31	0.11	11.60	-28.5	19.6
8,872.0	1.30	208.90	8,847.1	-208.3	391.5	1.03	-0.21	42.32	-11.2	34.2
8,966.0	2.20	259.70	8,941.1	-209.6	389.2	1.82	0.96	54.04	17.0	31.1
9,060.0	2.40	279.00	9,035.0	-209.6	385.5	0.85	0.21	20.53	22.6	24.4
9,155.0	2.60	278.00	9,129.9	-209.0	381.4	0.22	0.21	-1.05	18.0	24.7
9,249.0	2.20	280.80	9,223.8	-208.3	377.5	0.44	-0.43	2.98	15.3	23.9
9,344.0	1.80	272.30	9,318.7	-207.9	374.3	0.52	-0.42	-8.95	8.3	25.6
9,475.0	8.50	323.30	9,449.2	-200.1	366.4	5.72	5.11	38.93	16.3	12.6
9,570.0	17.10	350.50	9,541.8	-180.6	359.9	10.82	9.05	28.63	16.2	8.5
9,664.0	24.30	1.40	9,629.7	-147.6	358.1	8.66	7.66	11.60	14.9	5.2
9,758.0	37.90	1.20	9,710.0	-99.2	359.2	14.47	14.47	-0.21	10.0	1.1
9,853.0	51.10	357.70	9,777.6	-32.8	356.3	14.13	13.89	-3.68	-1.6	-1.9
9,947.0	60.30	358.00	9,830.5	44.8	355.4	9.79	9.79	0.32	-16.1	-4.3
9,992.0	61.60	358.50	9,852.4	84.1	354.2	3.05	2.89	1.11	-21.7	-5.7



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10,042.0	62.60	358.30	9,875.8	128.2	353.0	2.03	2.00	-0.40	-24.5	-7.6	
10,089.0	63.00	357.70	9,897.3	170.0	351.5	1.42	0.85	-1.28	-23.6	-9.4	
10,136.0	69.30	357.50	9,916.3	213.0	349.7	13.41	13.40	-0.43	-21.4	-10.7	
10,183.0	73.70	355.60	9,931.2	257.4	347.0	10.12	9.38	-4.04	-19.6	-11.4	
10,202.0	74.80	355.70	9,936.3	275.7	345.6	5.81	5.78	0.53	-18.7	-11.3	
10,231.0	75.90	355.90	9,943.7	303.8	343.6	3.85	3.79	0.69	-16.5	-11.3	
10,278.0	79.00	354.90	9,953.9	349.4	339.9	6.91	6.60	-2.13	-11.6	-10.9	
10,325.0	83.80	354.10	9,960.9	395.6	335.4	10.35	10.21	-1.70	-6.2	-9.7	
10,420.0	87.10	354.40	9,968.4	489.8	325.9	3.49	3.47	0.32	0.6	-4.1	
10,514.0	86.10	353.30	9,974.0	583.1	315.9	1.58	-1.06	-1.17	5.4	5.2	
10,608.0	89.00	352.70	9,978.0	676.3	304.4	3.15	3.09	-0.64	8.7	15.9	
10,703.0	90.20	353.50	9,978.7	770.6	293.0	1.52	1.26	0.84	8.7	26.6	
10,797.0	91.20	1.90	9,977.6	864.5	289.3	9.00	1.06	8.94	6.7	29.7	
10,892.0	91.20	2.40	9,975.6	959.4	282.8	0.53	0.00	0.53	4.0	25.4	
10,986.0	90.90	2.10	9,973.8	1,053.3	286.5	0.45	-0.32	-0.32	1.5	21.0	
11,080.0	89.80	2.10	9,973.3	1,147.2	300.0	1.17	-1.17	0.00	0.2	16.6	
11,175.0	88.60	2.50	9,974.6	1,242.1	303.8	1.33	-1.26	0.42	1.3	12.3	
11,269.0	88.00	1.00	9,977.4	1,336.0	306.6	1.72	-0.64	-1.60	3.8	8.7	
11,363.0	91.20	0.90	9,978.0	1,430.0	308.2	3.41	3.40	-0.11	4.1	6.4	
11,458.0	93.10	1.30	9,974.5	1,524.9	310.0	2.04	2.00	0.42	0.3	3.8	
11,552.0	93.10	1.60	9,969.4	1,618.8	312.4	0.32	0.00	0.32	-5.1	0.7	
11,646.0	93.60	1.20	9,963.9	1,712.6	314.7	0.69	0.53	-0.43	-10.9	-2.3	
11,741.0	89.50	2.10	9,961.3	1,807.5	317.4	4.42	-4.32	0.85	-13.7	-5.7	
11,835.0	87.40	0.80	9,963.9	1,901.4	319.8	2.63	-2.23	-1.38	-11.5	-8.6	
11,929.0	87.90	0.60	9,967.7	1,995.3	321.0	0.57	0.53	-0.21	-7.9	-10.7	
12,023.0	87.50	359.80	9,971.5	2,089.2	321.3	0.95	-0.43	-0.85	-4.4	-11.8	
12,117.0	89.40	359.40	9,974.0	2,183.2	320.6	2.07	2.02	-0.43	-2.2	-11.8	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Neptune 10 State Com
 Well: #202H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #202H
 TVD Reference: KB = 25 @ 3635.0usft (hp)
 MD Reference: KB = 25 @ 3635.0usft (hp)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Asd (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLag (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
12,212.0	90.90	357.70	9,973.8	2,278.2	318.2	2.39	1.58	-1.79	-2.7	-10.1	
12,308.0	91.00	357.00	9,972.2	2,372.0	313.9	0.75	0.11	-0.74	-4.8	-6.5	
12,401.0	90.30	358.80	9,971.2	2,467.0	310.4	2.03	-0.74	1.89	-5.9	-3.8	
12,495.0	90.60	358.70	9,970.4	2,560.9	308.3	0.34	0.32	-0.11	-6.7	-2.4	
12,590.0	92.10	357.30	9,969.2	2,655.9	305.0	2.16	1.58	-1.47	-9.1	0.1	
12,684.0	90.90	359.50	9,965.7	2,749.8	302.4	2.67	-1.28	2.34	-11.7	2.0	
12,778.0	91.60	359.30	9,963.6	2,844.7	301.4	0.77	0.74	-0.21	-13.9	2.3	
12,873.0	89.40	1.30	9,962.8	2,938.7	301.9	3.16	-2.34	2.13	-14.9	1.1	
12,968.0	88.70	2.00	9,968.1	3,033.6	304.6	2.94	-2.84	0.74	-11.8	-2.4	
13,062.0	87.10	0.80	9,971.1	3,127.5	306.9	1.34	0.43	-1.28	-6.8	-5.4	
13,157.0	87.20	0.20	9,975.9	3,222.3	307.8	0.64	0.11	-0.63	-2.2	-6.9	
13,251.0	88.00	359.30	9,979.8	3,316.3	307.3	1.28	0.85	-0.96	1.6	-7.3	
13,345.0	87.50	358.40	9,983.5	3,410.2	305.5	1.09	-0.53	-0.96	5.2	-6.1	
13,439.0	88.60	357.70	9,986.7	3,504.1	302.3	1.39	1.17	-0.74	8.2	-3.6	
13,534.0	90.20	357.80	9,987.7	3,599.0	298.5	1.69	1.68	0.11	9.1	-0.6	
13,628.0	91.30	357.40	9,988.5	3,692.9	294.6	1.25	1.17	-0.43	7.7	2.6	
13,722.0	92.60	359.20	9,983.3	3,786.8	291.8	2.36	1.38	1.91	4.4	4.7	
13,816.0	92.80	359.10	9,978.8	3,880.7	290.4	0.24	0.21	-0.11	-0.2	5.3	
13,911.0	90.60	359.60	9,976.0	3,975.6	289.3	2.37	-2.32	0.53	-3.1	5.7	
14,005.0	88.80	359.70	9,976.5	4,069.6	288.8	1.92	-1.91	0.11	-2.8	5.5	
14,099.0	89.20	359.20	9,978.1	4,163.6	287.9	0.68	0.43	-0.53	-1.2	5.7	
14,194.0	90.80	359.30	9,978.1	4,258.6	286.6	1.79	1.79	0.11	-1.5	6.2	
14,289.0	90.60	0.10	9,976.8	4,353.6	286.1	0.90	-0.32	0.84	-2.8	6.0	
14,383.0	92.60	359.00	9,974.2	4,447.5	285.4	2.43	2.13	-1.17	-5.6	6.0	
14,477.0	91.30	358.50	9,971.0	4,541.4	283.3	1.48	-1.36	-0.53	-8.9	7.3	
14,571.0	89.20	0.30	9,970.6	4,635.4	282.4	2.94	-2.23	1.91	-9.5	7.6	
14,666.0	88.30	2.30	9,974.3	4,730.3	284.5	3.71	-3.05	2.11	-5.8	4.7	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #202H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3635.0usft (hp)
Site:	Neptune 10 State Com	MD Reference:	KB = 25 @ 3635.0usft (hp)
Well:	#202H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Ad (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
14,760.0	88.30	2.40	9,980.4	4,824.0	288.4	0.11	0.00	0.11	0.1	0.1
14,855.0	88.50	1.30	9,986.3	4,918.8	291.4	1.17	0.21	-1.16	5.9	-3.7
14,949.0	89.00	0.40	9,990.0	5,012.7	292.8	2.83	2.66	-0.96	9.5	-5.8
15,043.0	90.70	0.10	9,990.3	5,106.7	293.2	1.84	1.81	-0.32	9.6	-6.9
15,138.0	90.50	359.10	9,989.3	5,201.7	292.6	1.07	-0.21	-1.05	8.5	-7.0
15,232.0	90.80	357.40	9,988.2	5,295.6	289.7	1.84	0.32	-1.81	7.3	-4.8
15,327.0	90.90	356.20	9,986.8	5,390.5	284.4	1.27	0.11	-1.26	5.7	-0.3
15,421.0	90.50	356.20	9,985.7	5,484.3	278.2	0.43	-0.43	0.00	4.5	5.2
15,516.0	89.80	355.20	9,985.4	5,579.0	271.0	1.28	-0.74	-1.05	4.1	11.6
15,610.0	90.50	357.70	9,985.2	5,672.8	265.2	2.76	0.74	2.66	3.7	16.7
15,704.0	89.90	357.20	9,984.8	5,766.7	261.0	0.83	-0.64	-0.53	3.2	20.2
15,798.0	91.10	359.60	9,984.0	5,860.7	258.4	2.85	1.28	2.55	2.3	22.1
15,893.0	90.40	359.40	9,982.8	5,955.6	257.6	0.77	-0.74	-0.21	0.9	22.2
15,987.0	91.30	359.60	9,981.4	6,049.6	256.8	0.98	0.96	0.21	-0.6	22.3
16,082.0	91.30	358.90	9,979.2	6,144.6	255.5	0.74	0.00	-0.74	-2.9	22.8
16,176.0	91.70	0.70	9,976.8	6,238.6	255.2	1.96	0.43	1.91	-5.5	22.4
16,270.0	91.40	0.30	9,974.2	6,332.5	256.0	0.53	-0.32	-0.43	-8.2	20.9
16,365.0	92.20	359.70	9,971.2	6,427.5	256.0	1.05	0.84	-0.63	-11.3	20.2
16,459.0	87.50	1.90	9,971.5	6,521.4	257.3	5.52	-5.00	2.34	-11.1	18.1
16,553.0	87.00	1.70	9,976.0	6,615.3	260.3	0.57	-0.53	-0.21	-6.8	14.5
16,647.0	86.90	2.10	9,982.4	6,736.0	264.3	0.34	-0.08	0.33	-0.5	9.5
16,768.0	88.70	2.10	9,986.0	6,826.9	267.7	1.91	1.91	0.00	3.0	5.3
16,863.0	89.40	1.50	9,987.6	6,924.8	270.7	0.97	0.74	-0.63	4.4	1.6
16,957.0	89.80	1.20	9,988.3	7,018.8	272.9	0.53	0.43	-0.32	4.9	-1.3
17,052.0	90.00	0.90	9,988.4	7,113.8	274.6	0.38	0.21	-0.32	5.0	-3.8
17,148.0	91.10	0.70	9,987.5	7,207.8	276.0	1.19	1.17	-0.21	3.9	-5.8
17,241.0	92.10	0.90	9,984.9	7,302.7	277.3	1.07	1.05	0.21	1.2	-7.9



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #202H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3635.0usft (hp)
Site:	Neptune 10 State Com	MD Reference:	KB = 25 @ 3635.0usft (hp)
Well:	#202H	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)	
17,335.0	92.90	0.60	9,980.8	7,396.6	278.5	0.91	0.85	-0.32	-3.1	-9.8	
17,430.0	91.60	1.40	9,977.1	7,491.5	280.2	1.61	-1.37	0.84	-6.9	-12.2	
17,524.0	88.80	0.70	9,976.7	7,585.5	281.9	3.07	-2.98	-0.74	-7.3	-14.7	
17,618.0	89.70	0.80	9,978.0	7,679.5	283.1	0.98	0.98	0.11	-6.0	-16.6	
17,713.0	90.70	0.90	9,977.6	7,774.5	284.5	1.06	1.05	0.11	-6.4	-18.8	
17,807.0	89.50	0.00	9,977.5	7,868.5	285.3	1.60	-1.28	-0.96	-6.5	-20.2	
17,902.0	89.00	359.90	9,978.7	7,963.5	285.2	0.54	-0.53	-0.11	-5.3	-20.9	
17,996.0	90.00	359.10	9,979.5	8,057.5	284.4	1.36	1.06	-0.85	-4.5	-20.8	
18,090.0	91.30	359.20	9,978.5	8,151.4	283.0	1.39	1.38	0.11	-5.5	-20.1	
18,184.0	92.00	358.40	9,975.8	8,245.4	281.0	1.13	0.74	-0.85	-8.3	-18.8	
18,278.0	89.60	359.30	9,974.4	8,340.4	279.1	2.70	-2.53	0.85	-9.6	-17.7	
18,373.0	90.10	0.10	9,974.7	8,434.3	278.6	1.00	0.53	0.85	-9.3	-17.9	
18,468.0	90.70	359.50	9,974.0	8,529.3	278.3	0.89	0.63	-0.63	-10.0	-18.3	
18,562.0	91.90	359.40	9,971.9	8,623.3	277.4	1.28	1.28	-0.11	-12.1	-18.1	
18,657.0	89.30	0.20	9,970.9	8,718.3	277.0	2.86	-2.74	0.84	-13.1	-18.5	
18,751.0	88.20	1.10	9,972.9	8,812.3	278.1	1.51	-1.17	0.98	-11.1	-20.3	
18,846.0	88.70	0.40	9,975.5	8,907.2	279.4	0.91	0.53	-0.74	-8.5	-22.3	
18,940.0	90.00	0.60	9,976.6	9,001.2	280.2	1.40	1.38	0.21	-7.4	-23.8	
19,033.0	90.00	0.20	9,976.6	9,094.2	280.8	0.43	0.00	-0.43	-7.4	-25.2	
19,127.0	87.80	359.00	9,978.4	9,188.2	280.2	2.67	-2.34	-1.28	-5.6	-25.3	
19,222.0	87.80	358.60	9,982.0	9,283.1	278.2	0.42	0.00	-0.42	-2.0	-24.0	
19,316.0	87.90	357.80	9,985.5	9,377.0	275.2	0.88	0.11	-0.85	1.6	-21.8	
19,410.0	88.50	357.40	9,988.5	9,470.9	271.3	0.77	0.64	-0.43	4.5	-18.6	
19,505.0	88.70	356.80	9,990.8	9,565.7	266.5	0.67	0.21	-0.63	6.8	-14.5	
19,599.0	89.30	356.40	9,992.5	9,659.5	260.9	0.77	0.64	-0.43	8.5	-9.8	
19,693.0	90.00	356.00	9,993.0	9,753.3	254.7	0.86	0.74	-0.43	9.0	-4.1	
19,788.0	90.60	355.90	9,992.5	9,848.1	248.0	0.64	0.63	-0.11	8.5	1.9	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #202H
Project:	Lee County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3635.0usft (hp)
Site:	Neptune 10 State Com	MD Reference:	KB = 25 @ 3635.0usft (hp)
Well:	#202H	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)
19,882.0	91.00	355.50	9,991.2	9,941.8	240.9	0.60	0.43	-0.43	7.2	8.2
19,976.0	91.40	355.50	9,989.3	10,035.5	233.6	0.43	0.43	0.00	5.3	14.8
20,070.0	92.10	355.30	9,986.4	10,129.1	226.0	0.77	0.74	-0.21	2.4	21.6
20,156.0	92.10	355.30	9,983.2	10,214.8	219.0	0.00	0.00	0.00	-0.7	28.0

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
9,410.0	9,384.6	-205.9	371.2	KOP, MD:9410.0', TVD:9384.6', N/S:-205.9', E/W:371.2', INC:4.89
9,698.6	9,660.6	-132.0	358.5	FTP Crossing, MD:9698.6', TVD:9660.6', N/S:-132.0', E/W:358.5', INC:28.31
20,070.0	9,986.4	10,129.1	226.0	Last MWD Survey (MD=20070.0')
20,156.0	9,983.2	10,214.8	219.0	Projection to Bit (MD=20156.0')

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

Neptune 10 State Com

#202H

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: #202H

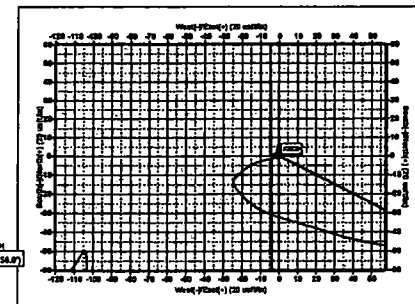
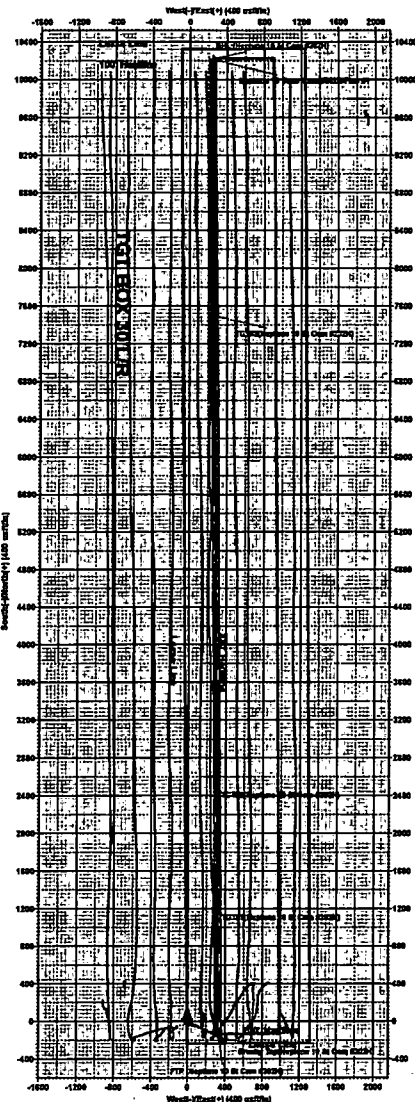
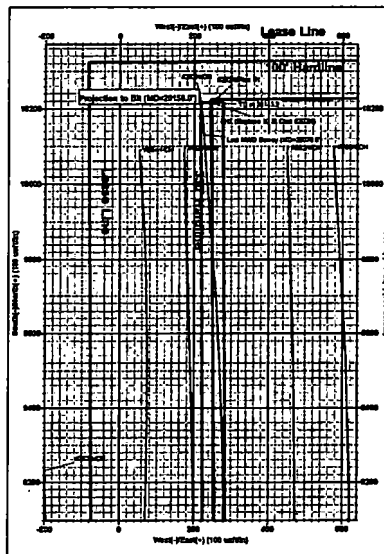
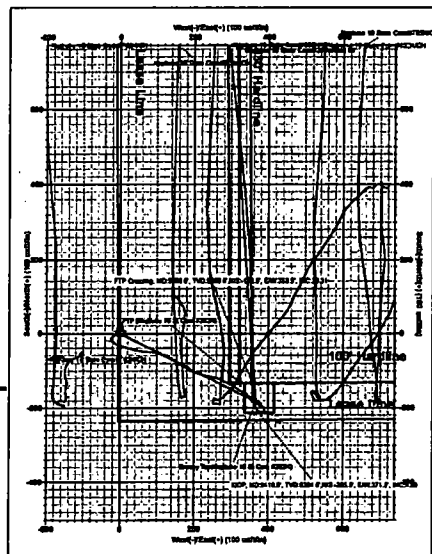
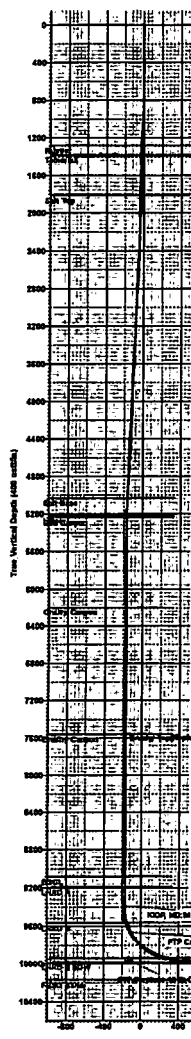
3810.0
KB = 25 @ 3530 Depth
Northing Easting Latitude Longitude Slot
0.0 0.0 44828.00 779105.00 32° 17' 31.883 N 103° 23' 51.862 W

SECTION DETAILS

Sec	MD	Inc	Adi	TVD	+N/S	+E/W	Diag	TFace	VSeal	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	1504.0	6.08	116.38	1503.4	-7.2	14.4	2.00	116.38	-6.8	
4	5067.2	6.08	116.38	5046.8	-174.8	352.6	0.00	0.00	-168.3	
5	5371.2	0.00	0.00	5350.0	-182.0	367.0	2.00	180.00	-173.1	
6	9416.3	0.00	0.00	9395.1	-182.0	367.0	0.00	0.00	-173.1	
7	10311.8	89.55	355.91	9968.0	365.0	326.5	10.00	355.91	392.8	
8	10433.6	89.55	359.56	9969.0	506.7	321.6	3.00	90.02	514.3	
9	11069.6	89.55	359.56	9974.0	1142.7	318.8	0.00	0.00	1150.0	TGT#1(Neptune 10 St Com #202H)
10	11083.4	89.83	359.56	9974.1	1156.5	318.7	2.00	-1.02	1163.8	
11	12370.3	89.83	359.56	9978.0	2443.3	306.8	0.00	0.00	2450.0	TGT#2(Neptune 10 St Com #202H)
12	12375.0	89.92	359.56	9978.0	2448.1	306.8	2.00	0.02	2454.8	
13	17422.8	89.92	359.56	9985.0	7495.7	267.9	0.00	0.00	7500.0	TGT#3(Neptune 10 St Com #202H)
14	17426.8	80.00	359.56	9985.0	7499.7	267.9	2.00	0.00	7504.0	
15	20143.2	90.00	359.56	9985.0	10216.0	247.0	0.00	0.00	10219.0	BHL (Neptune 10 St Com #202H)

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N/S	+E/W	Northing	Easting	Shape
Brushy Top(Neptune 10 St Com #202H)	7658.0	-182.0	367.0	448448.00	779472.00	Polygon
FTP (Neptune 10 St Com #202H)	8965.0	-132.0	327.0	448498.00	779432.00	Point
TGT#1(Neptune 10 St Com #202H)	8974.0	1142.7	318.8	447778.70	779421.81	Point
TGT#2(Neptune 10 St Com #202H)	8978.0	2443.3	306.8	449071.30	779411.80	Point
BHL (Neptune 10 St Com #202H)	9985.0	10216.0	247.0	458844.00	779352.00	Rectangle (Sides: L0.0 W60.0)
TGT#3(Neptune 10 St Com #202H)	9985.0	7495.7	267.9	454125.70	779372.35	Point



Lea County, NM (NAD 83 NME)
Neptune 10 State Com
#202H
Plan #1