

HOBBS OCD

FEB 04 2020

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Valiant 24 Fed Com

#744H

OH

Design: OH

Midland PVA

18 September, 2019



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Valiant 24 Fed Com
 Well: #744H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #744H
 TVD Reference: KB = 25 @ 3485.0usft
 MD Reference: KB = 25 @ 3485.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 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	Valiant 24 Fed Com		
Site Position:		Northing:	406,151.00 usft
From: Map		Easting:	760,107.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 6' 52.620 N
		Longitude:	103° 37' 38.212 W
		Grid Convergence:	0.38 °

Well	#744H		
Well Position	+N-S 0.0 usft	Northing:	406,023.00 usft
	+E-W 0.0 usft	Easting:	760,797.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 6' 51.309 N
		Longitude:	103° 37' 28.199 W
		Ground Level:	3,460.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	9/8/2019	6.73
			Dip Angle (°)
			59.92
			Field Strength (nT)
			47,639.02173355

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)
	0.0	0.0	0.0
			Direction (°)
			175.15

Survey Program	Date 9/18/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
140.0	20,325.0	Drilltech MWD (OH)	MWD
			Description
			OWSG MWD - Standard



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0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
140.0	0.70	141.04	140.0	-0.7	0.5	0.50	0.50	0.00	-0.9	0.0
315.0	0.97	130.93	315.0	-2.5	2.3	0.18	0.15	-5.78	-3.4	-0.3
400.0	0.88	128.38	400.0	-3.3	3.4	0.14	-0.11	-5.38	-4.7	-0.7
487.0	0.79	128.21	487.0	-4.1	4.4	0.11	-0.10	2.13	-6.0	-0.5
575.0	0.88	138.12	574.9	-5.0	5.4	0.17	0.10	8.99	-7.3	0.4
671.0	0.70	125.39	670.9	-5.8	6.3	0.24	-0.19	-11.18	-8.5	-1.1
782.0	0.70	141.74	781.9	-6.6	7.1	0.22	0.00	17.97	-9.6	1.5
855.0	0.82	135.68	854.9	-7.4	7.8	0.11	-0.09	-6.52	-10.8	0.4
901.0	0.70	144.84	900.9	-7.8	8.2	0.28	0.17	19.48	-11.1	2.2
1,034.0	1.83	80.83	1,033.9	-8.1	10.9	1.31	0.92	-47.98	-9.3	-9.9
1,127.0	2.81	70.20	1,126.8	-7.1	14.6	1.05	0.95	-11.43	-8.8	-12.9
1,219.0	3.69	48.40	1,218.7	-4.4	18.9	1.83	0.98	-23.70	-2.9	-16.7
1,311.0	4.88	39.09	1,310.4	0.5	23.5	1.28	1.05	-10.12	1.8	-17.0
1,404.0	6.07	46.03	1,403.0	6.9	29.4	1.67	1.52	7.48	2.5	-17.4
1,496.0	8.09	47.79	1,494.3	14.6	37.7	2.21	2.20	1.91	4.1	-18.6
1,591.0	8.18	47.81	1,588.4	23.6	47.6	0.10	0.09	-0.19	4.7	-20.0
1,686.0	8.09	49.46	1,682.4	32.5	57.7	0.29	-0.09	1.95	4.6	-21.7
1,781.0	9.15	42.88	1,778.3	42.4	67.9	1.52	1.12	-6.95	6.9	-22.0
1,875.0	10.73	38.01	1,868.9	55.0	78.1	2.10	1.68	-7.29	7.0	-20.5
1,970.0	10.82	38.18	1,962.2	69.3	88.6	0.10	0.09	0.18	3.1	-19.0
2,065.0	10.82	37.94	2,055.5	83.6	99.3	0.35	0.00	1.85	-1.3	-17.8
2,160.0	11.17	37.77	2,148.8	97.9	110.5	0.37	0.37	-0.18	-5.4	-16.7
2,255.0	11.78	38.03	2,241.9	112.8	122.1	0.64	0.64	0.27	-10.5	-15.7
2,350.0	11.78	37.77	2,334.9	128.1	134.0	0.06	0.00	-0.27	-15.9	-14.7
2,445.0	11.87	39.17	2,427.9	143.3	148.1	0.32	0.09	1.47	-21.7	-13.4
2,540.0	11.87	39.88	2,520.9	158.4	158.5	0.15	0.00	0.75	-27.5	-12.4



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2,635.0	12.13	39.17	2,613.8	173.6	171.1	0.31	0.27	-0.75	-33.2	-12.2
2,730.0	12.75	38.38	2,706.5	169.6	183.9	0.68	0.65	-0.83	-39.5	-11.8
2,825.0	11.28	41.90	2,799.5	204.7	198.6	1.75	-1.57	3.71	-46.0	-8.7
2,920.0	11.78	42.85	2,892.8	218.7	209.4	0.59	0.55	1.11	-51.1	-7.9
3,014.0	9.85	41.90	2,984.9	231.7	221.3	2.08	-2.05	-1.12	-54.8	-8.9
3,109.0	8.53	39.61	3,078.7	243.2	231.3	1.44	-1.39	-2.41	-55.5	-10.6
3,204.0	8.35	41.28	3,172.6	253.8	240.3	0.32	-0.19	1.76	-55.7	-8.8
3,299.0	8.44	43.92	3,266.6	264.0	249.7	0.42	0.09	2.78	-55.8	-8.4
3,394.0	7.74	44.82	3,360.7	273.6	259.0	0.74	-0.74	0.74	-55.2	-8.2
3,489.0	7.30	42.69	3,454.9	282.6	267.6	0.53	-0.46	-2.03	-53.4	-8.4
3,584.0	7.58	48.84	3,548.1	291.1	276.4	0.88	0.27	6.47	-52.2	-3.7
3,679.0	7.21	50.95	3,643.3	299.0	285.7	0.47	-0.37	2.22	-50.7	-3.7
3,773.0	7.65	47.08	3,736.5	307.0	294.9	0.71	0.47	-4.12	-48.6	-8.7
3,868.0	8.87	40.76	3,830.5	316.9	304.4	1.69	1.39	-6.65	-47.0	-14.3
3,964.0	7.58	40.76	3,925.5	327.3	313.4	1.47	-1.47	0.00	-46.6	-14.0
4,058.0	6.60	42.86	4,018.8	336.0	321.1	1.06	-1.02	2.23	-44.7	-12.2
4,153.0	7.65	34.85	4,113.0	345.2	328.4	1.51	1.11	-8.33	-40.4	-17.2
4,248.0	8.09	38.38	4,207.1	355.6	336.2	0.68	0.46	3.61	-40.3	-13.5
4,343.0	7.30	47.96	4,301.3	364.9	344.8	1.58	-0.83	10.08	-40.6	-7.0
4,438.0	8.88	35.04	4,395.3	374.9	353.5	2.53	1.66	-13.60	-37.4	-15.4
4,533.0	8.44	45.50	4,489.3	385.8	362.7	1.72	-0.46	11.01	-39.7	-7.9
4,628.0	8.44	43.74	4,583.2	395.7	372.5	0.27	0.00	-1.85	-39.3	-9.7
4,722.0	8.62	48.23	4,676.2	405.4	382.5	0.73	0.19	4.78	-40.1	-7.6
4,817.0	7.47	46.20	4,770.3	414.4	382.3	1.25	-1.21	-2.14	-39.0	-10.2
4,912.0	6.24	47.70	4,864.6	422.2	400.6	1.31	-1.29	1.58	-38.6	-10.4
5,007.0	6.60	49.37	4,959.0	429.2	408.5	0.43	0.38	1.76	-33.6	-11.0
5,102.0	8.35	41.11	5,053.2	438.0	417.2	2.16	1.84	-8.68	-29.9	-16.2



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5,197.0	8.09	39.26	5,147.2	448.3	426.0	0.39	-0.27	-1.95	-28.9	-16.7
5,292.0	8.79	42.34	5,241.2	458.9	435.1	0.88	0.74	3.24	-28.6	-14.8
5,387.0	9.78	39.61	5,334.9	470.4	445.1	1.12	1.02	-2.87	-30.2	-15.9
5,482.0	9.23	40.32	5,428.6	482.5	455.2	0.57	-0.56	0.75	-32.0	-15.0
5,577.0	8.97	38.65	5,522.4	494.1	464.7	0.39	-0.27	-1.78	-32.6	-15.3
5,671.0	9.23	38.03	5,615.3	505.7	473.9	0.30	0.28	-0.66	-33.4	-14.7
5,766.0	9.06	35.13	5,709.0	517.8	482.9	0.52	-0.18	-3.05	-33.8	-15.0
5,861.0	8.44	34.51	5,802.9	528.7	491.2	0.66	-0.65	-0.65	-34.2	-13.6
5,956.0	8.44	31.00	5,896.9	541.4	498.7	0.54	0.00	-3.89	-33.5	-13.4
6,051.0	7.65	30.38	5,991.0	552.8	505.5	0.84	-0.83	-0.65	-32.8	-11.0
6,146.0	7.30	35.57	6,085.2	563.2	512.2	0.80	-0.37	5.46	-32.0	-5.8
6,240.0	7.30	54.03	6,178.4	571.6	520.5	2.48	0.00	19.84	-30.3	3.6
6,335.0	7.39	55.78	6,272.6	578.6	530.5	0.25	0.09	1.84	-28.6	1.3
6,430.0	7.30	57.63	6,366.9	585.2	540.6	0.27	-0.09	1.95	-27.1	-1.3
6,525.0	7.12	58.42	6,461.1	591.5	550.7	0.22	-0.18	0.83	-25.6	-4.8
6,620.0	7.30	58.25	6,555.4	597.8	560.9	0.19	0.19	-0.18	-24.0	-8.8
6,714.0	6.77	58.51	6,648.6	603.8	570.7	0.56	-0.56	0.28	-23.4	-12.2
6,809.0	5.98	50.60	6,743.1	609.9	579.3	1.24	-0.83	-8.33	-22.4	-17.5
6,904.0	4.57	35.92	6,837.7	616.1	585.3	2.04	-1.48	-15.45	-19.3	-23.1
6,999.0	3.43	16.32	6,932.4	621.9	588.4	1.86	-1.20	-20.63	-13.8	-28.0
7,094.0	3.25	19.13	7,027.3	627.2	590.0	0.26	-0.19	2.86	-20.1	-27.0
7,189.0	2.90	19.31	7,122.1	632.0	591.7	0.37	-0.37	0.19	-25.3	-26.9
7,283.0	2.64	17.82	7,216.0	636.3	593.2	0.29	-0.28	-1.59	-29.1	-27.6
7,378.0	2.99	24.93	7,310.9	640.6	594.9	0.52	0.37	7.48	-37.0	-23.5
7,473.0	1.32	34.69	7,405.8	643.8	598.5	1.79	-1.78	10.27	-43.9	-16.5
7,568.0	0.70	66.42	7,500.8	644.9	597.7	0.86	-0.65	33.40	-47.5	9.7
7,663.0	0.87	81.18	7,595.8	645.3	599.0	0.36	0.28	15.54	-44.9	21.6



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7,758.0	1.08	112.47	7,690.8	645.0	600.6	0.58	0.09	32.94	-28.7	42.2
7,853.0	1.06	119.07	7,785.8	644.3	602.2	0.13	0.00	6.85	-25.4	45.3
7,947.0	1.14	105.18	7,879.8	643.6	603.9	0.30	0.09	-14.78	-37.3	37.7
8,042.0	0.97	104.56	7,974.8	643.2	605.6	0.18	-0.18	-0.85	-39.5	37.3
8,137.0	0.88	111.07	8,069.7	642.7	607.0	0.15	-0.09	6.85	-36.5	41.6
8,232.0	1.06	103.07	8,164.7	642.2	608.6	0.24	0.19	-6.42	-43.5	36.0
8,327.0	0.88	109.75	8,259.7	641.8	610.1	0.22	-0.19	7.03	-40.7	40.9
8,422.0	0.70	105.79	8,354.7	641.4	611.4	0.20	-0.19	-4.17	-44.7	38.0
8,517.0	0.53	156.88	8,449.7	640.8	612.1	0.58	-0.18	53.76	0.7	59.1
8,612.0	0.53	176.02	8,544.7	640.0	612.3	0.19	0.00	20.17	19.2	55.8
8,707.0	0.70	181.56	8,639.7	639.0	612.3	0.19	0.18	5.83	23.4	53.7
8,803.0	0.79	158.97	8,735.7	637.8	612.5	0.32	0.09	-23.53	-0.2	58.3
8,898.0	0.97	187.05	8,830.7	636.4	612.9	0.23	0.19	8.51	6.6	57.9
8,993.0	0.97	196.15	8,925.7	634.8	612.9	0.51	0.00	30.83	32.4	47.8
9,088.0	0.53	223.30	9,020.8	633.7	612.4	0.58	-0.46	28.58	49.5	28.1
9,182.0	0.70	257.85	9,114.8	633.3	611.5	0.43	0.18	39.76	55.7	-4.7
9,277.0	0.79	289.13	9,209.8	633.4	610.3	0.43	0.09	32.93	44.1	-32.6
9,373.0	0.70	328.07	9,305.8	634.1	609.4	0.52	-0.09	40.56	12.7	-52.7
9,467.0	0.53	325.35	9,399.8	634.9	608.8	0.18	-0.18	-2.89	14.2	-52.0
9,562.0	1.08	329.56	9,494.8	636.1	608.1	0.56	0.56	4.43	9.0	-52.9
9,657.0	1.76	315.33	9,589.8	637.8	608.7	0.82	0.74	-14.98	19.4	-49.3
9,752.0	1.58	302.32	9,684.5	639.6	604.5	0.44	-0.19	-13.69	27.2	-44.0
9,847.0	0.97	318.75	9,779.5	640.9	602.9	0.74	-0.64	17.29	11.8	-49.5
9,942.0	1.23	333.52	9,874.5	642.4	601.9	0.40	0.27	15.55	-3.2	-50.6
10,037.0	1.08	344.68	9,969.5	644.2	601.2	0.29	-0.18	11.75	-14.8	-48.9
10,132.0	0.79	350.22	10,064.5	645.7	600.9	0.30	-0.28	5.83	-21.0	-47.1
10,227.0	0.70	340.80	10,159.5	646.9	600.6	0.16	-0.09	-8.81	-14.3	-50.0



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10,322.0	0.88	356.11	10,254.5	648.1	600.3	0.29	0.19	18.01	-28.2	-44.4
10,416.0	0.87	296.87	10,348.4	649.2	599.6	0.98	0.10	-63.02	22.5	-47.5
10,511.0	0.44	295.81	10,443.4	649.7	598.5	0.56	-0.56	-1.12	22.2	-47.1
10,606.0	0.09	82.87	10,538.4	649.9	598.3	0.55	-0.37	165.33	-38.6	34.9
10,701.0	0.79	205.73	10,633.4	649.3	598.1	0.87	0.74	118.80	46.5	22.1
10,891.0	0.44	258.37	10,823.4	648.0	596.8	0.33	-0.18	27.71	44.2	-22.5
10,986.0	0.26	194.21	10,918.4	647.7	596.4	0.42	-0.19	-67.54	39.2	28.7
11,081.0	0.70	230.42	11,013.4	647.1	595.9	0.54	0.46	38.12	48.4	0.9
11,176.0	0.79	256.18	11,108.4	646.6	594.8	0.36	0.09	27.12	42.8	-19.9
11,271.0	0.79	254.24	11,203.4	646.2	593.5	0.03	0.00	-2.04	42.1	-18.5
11,365.0	0.88	206.78	11,297.4	645.4	592.6	0.72	0.10	-50.49	41.0	18.1
11,460.0	0.97	227.96	11,392.4	644.2	591.7	0.37	0.09	22.29	43.2	2.3
11,555.0	1.41	224.36	11,487.4	642.9	590.2	0.47	0.46	-3.79	41.0	5.0
11,650.0	1.85	219.00	11,588.3	640.7	588.4	0.46	0.44	-5.31	37.5	8.7
11,790.0	2.11	202.87	11,722.2	636.8	586.0	0.46	0.19	-12.04	29.1	18.2
11,885.0	2.20	209.99	11,817.2	633.6	584.4	0.30	0.09	7.49	27.6	14.6
11,980.0	2.20	212.63	11,912.1	630.4	582.5	0.11	0.00	2.78	24.6	13.4
12,074.0	2.37	214.65	12,006.0	627.3	580.5	0.20	0.18	2.15	21.3	12.6
12,169.0	2.55	214.65	12,100.9	624.0	578.2	0.19	0.19	0.00	17.2	12.6
12,267.0	2.20	216.32	12,198.9	620.7	575.8	0.36	-0.36	1.70	13.5	12.2
12,361.0	8.71	185.12	12,292.4	612.1	574.1	7.36	6.93	-33.19	-2.6	16.4
12,456.0	21.72	172.90	12,383.9	587.4	575.6	14.03	13.69	-12.66	-15.6	15.8
12,551.0	37.64	177.12	12,468.2	540.7	579.3	16.69	16.76	4.44	-28.8	20.0
12,646.0	43.09	179.41	12,538.5	479.2	581.1	5.94	5.74	2.41	-40.6	22.1
12,741.0	51.97	178.79	12,602.6	409.2	582.2	9.36	9.35	-0.65	-44.5	22.5
12,836.0	62.78	179.49	12,653.7	329.3	583.4	11.40	11.38	0.74	-43.6	23.5
12,931.0	67.45	179.85	12,693.7	243.2	583.9	4.83	4.92	0.36	-34.8	23.8



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Valiant 24 Fed Com
 Well: #744H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #744H
 TVD Reference: KB = 25 @ 3485.0usft
 MD Reference: KB = 25 @ 3485.0usft
 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)
13,026.0	69.38	179.85	12,728.7	154.8	584.1	2.03	2.03	0.00	-11.5	23.5
13,120.0	81.78	180.99	12,752.0	64.0	583.4	13.24	13.19	1.21	10.9	22.0
13,215.0	91.28	180.20	12,757.8	-30.7	582.4	10.03	10.00	-0.83	16.5	20.4
13,303.0	85.65	180.11	12,760.1	-118.7	582.2	6.40	-6.40	-0.10	18.6	19.7
13,403.0	87.32	180.90	12,766.3	-218.5	581.3	1.85	1.87	0.79	24.6	18.1
13,498.0	88.20	180.99	12,770.0	-313.4	579.7	0.93	0.93	0.09	28.1	16.0
13,593.0	89.08	181.25	12,772.2	-408.3	577.9	0.97	0.93	0.27	30.2	13.5
13,688.0	90.66	180.90	12,772.4	-503.3	576.1	1.70	1.66	-0.37	30.2	11.2
13,782.0	87.58	179.32	12,773.9	-597.3	575.9	3.68	-3.28	-1.68	31.5	10.4
13,877.0	87.05	179.87	12,778.3	-692.2	576.8	0.67	-0.56	0.37	35.8	10.7
13,972.0	87.76	179.49	12,782.6	-787.1	577.5	0.77	0.75	-0.19	39.9	10.8
14,067.0	89.25	178.53	12,785.1	-882.0	579.1	1.87	1.57	-1.01	42.2	11.8
14,162.0	88.20	177.12	12,787.2	-978.9	582.7	1.85	-1.11	-1.48	44.1	14.8
14,256.0	91.28	177.03	12,787.7	-1,070.8	587.5	3.28	3.28	-0.10	44.4	19.0
14,351.0	91.54	181.60	12,785.3	-1,165.7	588.6	4.82	0.27	4.81	41.8	18.6
14,446.0	90.40	180.64	12,783.7	-1,260.7	586.8	1.57	-1.20	-1.01	40.0	17.2
14,541.0	89.87	179.76	12,783.5	-1,355.7	586.4	1.08	-0.56	-0.93	39.6	16.2
14,636.0	89.34	180.46	12,784.1	-1,450.7	586.3	0.92	-0.56	0.74	40.1	15.5
14,731.0	89.60	180.81	12,785.0	-1,545.7	585.2	0.46	0.27	0.37	40.8	13.8
14,826.0	90.04	179.85	12,785.3	-1,640.7	584.7	1.11	0.46	-1.01	40.9	12.7
14,921.0	90.57	181.25	12,784.8	-1,735.7	583.7	1.58	0.56	1.47	40.2	11.2
15,016.0	90.31	179.58	12,784.1	-1,830.7	583.1	1.78	-0.27	-1.76	39.3	9.9
15,111.0	90.92	180.64	12,783.1	-1,925.7	582.9	1.29	0.64	1.12	38.1	9.2
15,206.0	90.57	179.06	12,781.8	-2,020.7	583.1	1.70	-0.37	-1.66	38.7	8.8
15,301.0	90.48	178.44	12,781.0	-2,115.6	585.2	0.66	-0.09	-0.65	35.6	10.3
15,395.0	90.92	178.44	12,779.8	-2,209.6	587.8	0.47	0.47	0.00	34.3	12.3
15,490.0	90.75	178.26	12,778.4	-2,304.5	580.5	0.26	-0.18	-0.19	32.7	14.4



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Valiant 24 Fed Com
 Well: #744H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #744H
 TVD Reference: KB = 25 @ 3485.0usft
 MD Reference: KB = 25 @ 3485.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

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)
15,585.0	91.38	178.00	12,776.7	-2,399.5	593.6	0.70	0.64	-0.27	30.8	18.9
15,679.0	90.68	179.14	12,775.0	-2,493.4	595.9	1.42	-0.74	1.21	29.0	18.7
15,774.0	89.69	180.29	12,774.7	-2,588.4	596.4	1.58	-1.02	1.21	28.5	18.6
15,869.0	88.64	181.60	12,776.1	-2,683.4	594.8	1.77	-1.11	1.38	29.7	18.4
15,964.0	88.64	180.37	12,778.4	-2,778.3	593.2	1.29	0.00	-1.29	31.8	14.2
16,058.0	87.41	179.85	12,781.6	-2,872.3	593.0	1.42	-1.31	-0.55	34.8	13.5
16,153.0	87.05	180.02	12,788.2	-2,967.2	593.1	0.42	-0.38	0.18	39.2	13.0
16,247.0	86.88	181.34	12,791.2	-3,061.0	592.0	1.41	-0.18	1.40	44.0	11.3
16,342.0	89.16	180.02	12,794.5	-3,156.0	590.9	2.77	2.40	-1.39	47.1	9.6
16,436.0	90.22	179.49	12,795.0	-3,250.0	591.3	1.28	1.13	-0.56	47.5	9.4
16,531.0	91.71	179.23	12,793.4	-3,344.9	592.4	1.59	1.57	-0.27	45.7	9.9
16,625.0	89.08	179.67	12,792.7	-3,438.9	593.3	2.84	-2.80	0.47	44.9	10.2
16,720.0	88.72	179.93	12,794.5	-3,533.9	593.6	0.47	-0.38	0.27	46.5	9.9
16,815.0	88.20	181.16	12,797.1	-3,628.9	592.7	1.41	-0.55	1.29	48.9	8.4
16,909.0	93.65	180.55	12,795.6	-3,722.8	591.3	5.83	5.80	-0.65	47.2	6.5
17,004.0	91.80	179.85	12,791.1	-3,817.7	591.0	2.08	-1.95	-0.74	42.5	5.5
17,099.0	89.60	180.29	12,789.9	-3,912.7	590.8	2.36	-2.32	0.46	41.1	4.8
17,192.0	91.28	181.25	12,789.2	-4,005.7	589.6	2.08	1.81	1.03	40.2	3.0
17,285.0	90.04	182.04	12,788.1	-4,098.6	588.9	1.58	-1.33	0.85	39.0	-0.2
17,381.0	89.87	182.13	12,788.2	-4,194.6	583.4	0.20	-0.18	0.09	38.9	-4.3
17,476.0	88.81	181.34	12,789.3	-4,289.5	580.6	1.39	-1.12	-0.83	39.8	-7.8
17,570.0	88.72	180.73	12,791.3	-4,383.5	578.9	0.66	-0.10	-0.65	41.6	-10.1
17,665.0	89.08	180.99	12,793.1	-4,478.4	577.4	0.47	0.38	0.27	43.3	-12.1
17,760.0	88.99	179.93	12,794.7	-4,573.4	576.7	1.12	-0.09	-1.12	44.7	-13.4
17,855.0	89.60	179.85	12,795.9	-4,668.4	576.8	0.65	0.64	-0.08	45.7	-13.8
17,950.0	89.69	180.55	12,796.5	-4,763.4	576.5	0.74	0.09	0.74	46.1	-14.8
18,044.0	89.25	179.93	12,797.4	-4,857.4	576.1	0.81	-0.47	-0.66	46.8	-15.7



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Vallant 24 Fed Com
 Well: #744H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #744H
 TVD Reference: KB = 25 @ 3485.0usft
 MD Reference: KB = 25 @ 3485.0usft
 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)
18,139.0	88.90	178.32	12,798.9	-4,952.4	576.7	0.74	-0.37	-0.84	48.1	-15.7
18,234.0	88.55	177.82	12,801.0	-5,047.3	579.1	1.62	-0.37	-1.58	50.1	-13.9
18,329.0	89.69	178.35	12,802.5	-5,142.3	582.3	1.32	1.20	0.56	51.3	-11.3
18,424.0	90.92	177.47	12,802.0	-5,237.2	585.8	1.59	1.29	-0.93	50.6	-8.4
18,519.0	90.48	177.65	12,800.8	-5,332.1	589.8	0.50	-0.46	0.19	49.3	-5.0
18,613.0	91.45	177.74	12,799.2	-5,426.0	593.6	1.04	1.03	0.10	47.5	-1.8
18,708.0	91.63	178.18	12,796.7	-5,520.9	597.0	0.50	0.19	0.46	44.8	1.0
18,803.0	90.57	178.70	12,794.8	-5,615.9	599.5	1.24	-1.12	0.55	42.8	3.0
18,897.0	90.84	179.87	12,793.7	-5,709.8	600.9	1.07	0.29	1.03	41.4	3.8
18,993.0	90.84	180.11	12,792.3	-5,805.8	601.1	0.46	0.00	0.46	39.9	3.3
19,087.0	88.37	178.18	12,792.9	-5,899.8	602.5	3.33	-2.63	-2.05	40.3	4.2
19,182.0	88.20	177.82	12,795.8	-5,994.7	605.8	0.42	-0.18	-0.38	43.0	6.9
19,277.0	88.55	177.03	12,798.5	-6,089.6	610.0	0.91	0.37	-0.83	45.5	10.6
19,373.0	89.16	177.30	12,800.4	-6,185.4	614.8	0.69	0.64	0.28	47.2	14.7
19,467.0	90.22	177.47	12,800.9	-6,279.3	619.1	1.14	1.13	0.18	47.6	18.4
19,562.0	90.13	177.03	12,800.6	-6,374.2	623.6	0.47	-0.08	-0.46	47.1	22.4
19,657.0	89.25	179.23	12,801.1	-6,469.2	628.7	2.49	-0.93	2.32	47.4	24.9
19,752.0	89.52	179.58	12,802.1	-6,564.2	627.7	0.47	0.28	0.37	48.2	25.3
19,847.0	89.69	178.70	12,802.8	-6,659.1	629.2	0.94	0.18	-0.93	48.7	26.2
19,941.0	88.72	179.85	12,804.1	-6,753.1	630.3	1.60	-1.03	1.22	49.8	26.8
20,036.0	88.55	179.06	12,806.4	-6,848.1	631.2	0.85	-0.18	-0.83	51.9	27.1
20,131.0	89.08	179.06	12,808.3	-6,943.1	632.8	0.56	0.56	0.00	53.7	28.1
20,325.0	89.08	179.06	12,811.4	-7,137.0	636.0	0.00	0.00	0.00	56.4	30.0



Midland PVA

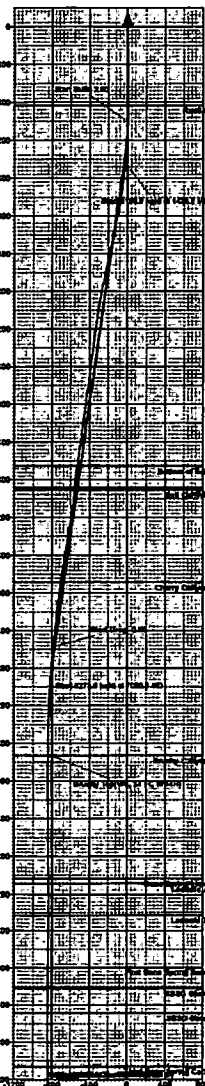
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Valiant 24 Fed Com
Well: #744H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #744H
TVD Reference: KB = 25 @ 3485.0usft
MD Reference: KB = 25 @ 3485.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
12,317.0	12,248.7	617.5	574.8	KOP, MD:12317.0', TVD:12248.7', N/S:617.5', E/W:574.8', INC:5.54
12,503.4	12,426.6	567.0	577.6	FTP Crossing, MD:12503.4', TVD:12426.6', N/S:567.0', E/W:577.6', INC:29.65
20,131.0	12,808.3	-6,943.1	632.8	Last MWD Survey (MD=20131.0')
20,325.0	12,811.4	-7,137.0	636.0	Projection to Bit (MD=20325.0')

Checked By: _____ Approved By: _____ Date: _____



#744H

Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

[illegible]

To convert a Magnetic Direction to a Grid Direction, Add 8.25°
To convert a Magnetic Direction to a True Direction, Add 8.73° E
To convert a True Direction to a Grid Direction, Subtract 0.48°

WELL DETAILS: #744H

		3485.0		ICB = 25 @ 3485.0m			
+N+S	+E+W	Northings	Eastings	Latitude	Longitude	Site	
0.0	0.0	408023.00	780797.00	32° 6' 51.308 N	103° 37' 28.188 W		

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+W-S	+E-W	Dleg	TBase	V-Set	Target
1	0.0	0.0	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.0	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1425.2	8.50	42.13	1423.6	23.4	21.1	2.00	42.13	-21.5	
4	6625.1	8.50	42.13	6566.4	593.6	538.9	0.00	0.00	-546.1	
5	7050.3	0.00	0.00	6990.0	617.0	556.0	2.00	180.00	-587.6	
6	12323.8	0.00	0.00	12283.5	617.0	556.0	0.00	0.00	-587.6	
7	13072.9	89.89	179.65	12741.0	140.5	560.2	12.00	179.65	-52.6	
8	20578.5	89.89	179.65	12755.5	-7145.0	606.0	0.00	717.0	717.0	PBHL/VAL 24 FC #744H

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Brushy Top(VAL 24 FC #7440)	7728.0	617.0	658.0	406840.00	781335.00	Polygon
FTP(VAL 24 FC #7440)	12741.0	687.0	658.0	406830.00	781333.00	Point
PERH(VAL 24 FC #7440)	12755.0	-7145.0	658.0	388378.00	781403.00	Rectangle (Sides: L0.0 W60.0)

