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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Lobo Blanco 9 Fed

#704H

OH

Design: OH

Final PVA Report

30 August, 2019



Final PVA Report

Company:	EOG Resources - Midland			Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)			TVD Reference:	KB = 25 @ 3363.0usft
Site:	Lobo Blanco 9 Fed			MD Reference:	KB = 25 @ 3363.0usft
Well:	#704H			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	Lobo Blanco 9 Fed				
Site Position:		Northing:	383,514.00 usft	Latitude:	32° 3' 5.410 N
From:	Map	Easting:	805,018.00 usft	Longitude:	103° 28' 56.122 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 "

Well	#704H					
Well Position	+N-S	0.0 usft	Northing:	383,555.00 usft	Latitude:	32° 3' 5.738 N
	+E-W	0.0 usft	Easting:	808,012.00 usft	Longitude:	103° 28' 44.569 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,338.0 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/17/2018	6.73	59.80	47,691.79764767

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)	Direction (°)	
	0.0	0.0	0.0	4.99	

Survey Program	Date	8/30/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
132.0	23,078.0	Intrepid MWD #1 (OH)	MWD	OWSG MWD - Standard	



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Survey											
MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (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	0.00	0.0	0.0
132.0	0.40	182.10	132.0	-0.5	-0.1	0.30	0.30	0.00	-0.5	0.0	
308.0	0.50	335.10	308.0	-0.4	-0.5	0.49	0.06	81.25	0.1	0.6	
485.0	0.60	284.30	485.0	0.6	-1.8	0.27	0.06	-28.70	-1.9	-0.1	
667.0	1.30	287.30	667.0	1.4	-4.7	0.39	0.38	1.65	-4.9	0.0	
788.0	1.50	285.40	787.9	2.3	-7.5	0.17	0.17	-1.57	-7.8	-0.2	
957.0	1.20	288.80	956.9	3.4	-11.3	0.18	-0.18	2.01	-11.8	0.4	
1,146.0	1.30	284.20	1,145.8	4.6	-15.3	0.07	0.05	-2.43	-15.9	-0.7	
1,336.0	4.10	112.90	1,335.7	2.5	-11.1	2.84	1.47	-90.16	13.5	-2.4	
1,526.0	9.50	108.10	1,524.3	-5.1	10.1	2.86	2.84	-2.53	5.0	-2.6	
1,716.0	7.80	103.50	1,712.1	-12.9	37.5	0.97	-0.89	-2.42	2.7	-2.9	
1,905.0	9.10	103.00	1,899.1	-19.3	64.6	0.69	0.69	-0.26	4.5	-2.1	
2,084.0	10.00	103.30	2,085.5	-26.4	95.1	0.48	0.48	0.16	2.6	-1.3	
2,283.0	10.30	104.30	2,271.5	-34.4	127.4	0.18	0.16	0.53	-1.2	-0.8	
2,472.0	10.50	103.60	2,457.4	-42.6	160.5	0.13	0.11	-0.37	-5.8	-0.4	
2,662.0	10.60	104.00	2,644.2	-50.9	194.3	0.07	0.05	0.21	-11.0	0.2	
2,852.0	10.50	99.60	2,831.0	-58.0	228.4	0.43	-0.05	-2.32	-16.2	0.7	
3,041.0	11.60	94.50	3,016.5	-62.4	264.3	0.78	0.58	-2.70	-23.3	3.0	
3,231.0	10.50	106.10	3,203.0	-68.7	300.0	1.30	-0.58	6.11	-28.7	10.7	
3,421.0	10.00	97.90	3,389.8	-75.8	332.9	0.81	-0.26	-4.32	-34.1	7.6	
3,611.0	11.30	104.60	3,576.7	-82.7	367.3	0.94	0.68	3.53	-38.4	13.5	
3,801.0	12.30	82.30	3,762.7	-88.2	405.5	1.42	0.53	-8.47	-50.0	7.6	
3,990.0	11.30	100.50	3,947.7	-92.4	443.9	1.03	-0.53	4.34	-57.5	19.6	
4,181.0	8.40	111.60	4,135.9	-101.0	475.2	1.81	-1.52	5.81	-55.5	30.2	
4,371.0	9.10	111.20	4,323.7	-111.5	502.2	0.37	0.37	-0.21	-55.0	26.4	
4,561.0	8.10	111.00	4,511.5	-121.7	528.7	0.53	-0.53	-0.11	-54.0	23.0	
4,751.0	9.50	104.00	4,699.3	-130.3	556.4	0.93	0.74	-3.68	-55.6	15.1	



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Design:	OH	Database:	EDM 5000.14

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MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	EW (usft)	DLeg ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)	
4,941.0	10.20	104.00	4,886.5	-138.2	587.9	0.37	0.37	0.00	-58.4	15.5	
5,131.0	11.50	111.30	5,073.1	-149.1	621.9	0.99	0.68	3.84	-62.2	21.4	
5,321.0	9.60	112.40	5,259.9	-162.0	654.2	1.01	-1.00	0.58	-67.2	19.0	
5,511.0	8.00	110.40	5,447.6	-172.7	681.2	0.86	-0.84	-1.05	-67.3	13.2	
5,701.0	8.20	105.20	5,635.8	-180.9	706.7	0.40	0.11	-2.74	-65.2	5.7	
5,891.0	8.10	101.50	5,823.8	-187.1	732.9	0.28	-0.05	-1.95	-62.7	2.4	
6,081.0	8.30	100.80	6,011.9	-192.3	758.5	0.12	0.11	-0.37	-60.1	3.5	
6,271.0	8.70	99.80	6,199.8	-197.3	787.1	0.22	0.21	-0.53	-58.6	4.8	
6,461.0	8.70	104.50	6,387.6	-203.4	815.2	0.37	0.00	2.47	-57.0	10.9	
6,650.0	8.90	104.30	6,574.4	-210.6	843.2	0.11	0.11	-0.11	-56.4	10.8	
6,841.0	8.80	101.80	6,763.1	-217.2	871.8	0.21	-0.05	-1.31	-56.4	9.3	
7,029.0	8.90	99.20	6,948.9	-222.5	900.2	0.22	0.05	-1.38	-56.4	9.0	
7,219.0	7.90	102.80	7,136.8	-227.7	927.5	0.59	-0.53	1.89	-53.7	14.4	
7,409.0	7.30	99.50	7,325.2	-232.6	952.1	0.39	-0.32	-1.74	-49.9	13.3	
7,599.0	5.50	100.90	7,514.0	-236.3	973.0	0.95	-0.95	0.74	-41.1	16.8	
7,789.0	3.50	141.90	7,703.4	-242.6	985.5	1.93	-1.05	21.58	-10.9	29.0	
7,979.0	2.10	196.30	7,893.2	-250.5	988.1	1.50	-0.74	28.63	10.0	14.5	
8,169.0	2.10	198.30	8,083.1	-257.2	986.0	0.04	0.00	1.05	3.3	10.5	
8,358.0	0.60	319.10	8,272.1	-259.7	984.3	1.30	-0.79	63.92	8.1	-5.3	
8,549.0	0.60	257.10	8,463.1	-259.2	982.7	0.32	0.00	-32.46	7.0	3.8	
8,739.0	0.40	238.80	8,653.1	-259.7	981.1	0.13	-0.11	-9.63	3.8	5.5	
8,929.0	0.50	239.50	8,843.0	-260.5	979.8	0.05	0.05	0.37	2.4	5.5	
9,119.0	0.70	219.80	9,033.0	-261.8	978.4	0.15	0.11	-10.37	-1.5	5.7	
9,309.0	1.00	222.40	9,223.0	-263.9	976.5	0.16	0.16	1.37	-4.1	5.8	
9,499.0	0.90	218.30	9,413.0	-266.3	974.5	0.06	-0.05	-2.16	-7.6	5.4	
9,689.0	0.80	208.10	9,603.0	-268.7	972.9	0.10	-0.05	-5.37	-11.3	3.7	
9,879.0	0.50	165.10	9,793.0	-270.6	972.5	0.29	-0.16	-22.63	-12.5	-5.9	



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10,069.0	0.70	99.10	9,982.9	-271.6	973.9	0.36	0.11	-34.74	-1.2	-14.6	
10,259.0	0.10	20.50	10,172.9	-271.8	975.1	0.36	-0.32	-41.37	13.7	-5.2	
10,449.0	1.70	347.30	10,362.9	-268.7	974.5	0.85	0.84	-17.47	11.3	3.1	
10,639.0	2.50	335.00	10,552.8	-262.2	972.1	0.48	0.42	-6.47	3.5	4.8	
10,828.0	0.90	314.10	10,741.7	-257.5	969.3	0.89	-0.85	-11.06	-3.7	4.3	
11,018.0	1.30	278.70	10,931.7	-258.1	968.1	0.41	0.21	-18.63	-8.9	0.4	
11,208.0	0.30	251.80	11,121.6	-255.9	963.5	0.55	-0.53	-14.16	-10.6	-4.6	
11,398.0	1.80	199.00	11,311.6	-258.9	962.1	0.86	0.79	-27.79	-6.0	-11.6	
11,588.0	0.70	294.40	11,501.6	-261.2	960.1	1.05	-0.58	50.21	-11.9	10.0	
11,777.0	0.90	275.00	11,690.6	-260.6	957.5	0.18	0.11	-10.26	-17.1	5.1	
11,844.0	1.20	238.70	11,757.5	-261.0	956.4	1.08	0.45	-54.18	-17.9	-8.3	
12,007.0	2.80	211.30	11,920.4	-265.2	952.9	1.12	0.98	-16.81	-18.5	-14.6	
12,198.0	2.20	210.90	12,111.3	-272.4	948.6	0.31	-0.31	-0.21	-26.8	-14.8	
12,294.0	1.80	235.70	12,207.2	-274.8	946.4	0.98	-0.42	25.83	-33.7	-1.4	
12,341.0	1.00	303.40	12,254.2	-275.0	945.4	3.61	-1.70	144.04	-14.8	31.3	
12,389.0	1.50	352.80	12,302.2	-274.1	945.0	2.37	1.04	102.92	13.2	31.9	
12,404.2	1.56	329.79	12,317.4	-273.8	944.9	4.04	0.42	-151.28	-0.7	34.5	
KOP (LB 9 Fed #704H)											
12,436.0	2.30	297.60	12,349.2	-273.1	944.1	4.04	2.32	-101.27	-19.4	29.5	
12,484.0	7.00	339.00	12,397.0	-269.9	942.2	11.43	9.79	88.25	6.4	37.5	
12,531.0	16.90	359.40	12,442.9	-260.4	941.1	22.58	21.08	43.40	19.1	34.0	
12,579.0	25.80	6.00	12,487.6	-243.0	942.1	19.18	18.54	13.75	19.2	31.0	
12,626.0	30.30	8.20	12,528.1	-221.1	944.9	9.82	9.57	4.68	15.7	28.0	
12,633.7	31.04	8.32	12,535.7	-217.2	945.4	9.62	9.58	1.62	15.1	27.5	
HL Crossing, MD:12633.7, TVD:12535.7, N/S:-217.2, EW:945.4, INC:31.04											
12,674.0	34.90	8.90	12,569.5	-195.5	948.7	9.62	9.58	1.43	12.1	24.3	
12,721.0	41.00	6.20	12,606.5	-166.9	952.5	13.45	12.98	-5.74	7.5	21.2	



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12,769.0	49.40	2.80	12,640.3	-132.9	955.1	18.20	17.50	-7.08	1.7	18.8
12,798.0	53.36	1.90	12,657.2	-111.9	955.9	14.90	14.67	-3.31	-2.0	17.9
FTP (LB 9 Fed #704H)										
12,816.0	56.30	1.30	12,668.7	-95.5	958.4	14.90	14.69	-3.03	-4.8	17.3
12,864.0	61.10	0.90	12,693.6	-54.5	957.2	10.03	10.00	-0.83	-11.4	16.3
12,911.0	63.30	1.90	12,715.6	-13.0	958.2	5.04	4.68	2.13	-15.9	15.0
12,859.0	65.70	1.20	12,736.2	30.3	959.4	5.17	5.00	-1.46	-17.6	13.3
13,006.0	74.10	2.40	12,752.4	74.4	960.7	18.03	17.87	2.55	-18.7	11.6
13,054.0	81.70	3.00	12,762.4	121.3	963.0	15.88	15.83	1.25	-21.6	9.0
13,101.0	81.50	1.60	12,769.3	167.7	964.8	2.88	-0.43	-2.88	-22.7	6.6
13,149.0	80.40	0.90	12,776.8	215.1	965.9	2.71	-2.29	-1.46	-18.2	5.1
13,244.0	89.20	1.30	12,785.4	309.6	967.7	9.27	9.26	0.42	-8.8	2.4
13,339.0	89.50	0.20	12,786.5	404.6	968.9	1.20	0.32	-1.16	-8.8	0.3
13,434.0	86.90	0.30	12,789.5	499.5	969.3	2.74	-2.74	0.11	-2.9	-1.0
13,529.0	89.10	0.00	12,792.8	594.5	969.6	2.34	2.32	-0.32	1.3	-2.0
13,624.0	90.10	0.60	12,793.5	689.5	970.1	1.23	1.05	0.63	2.8	-3.4
13,718.0	90.70	1.80	12,792.8	783.4	972.1	1.43	0.84	1.28	3.1	-6.2
13,814.0	90.50	0.90	12,791.8	879.4	974.3	0.96	-0.21	-0.94	3.0	-9.3
13,909.0	88.10	359.00	12,793.0	974.4	974.2	3.22	-2.53	-2.00	5.1	-10.0
14,004.0	88.00	358.60	12,796.2	1,069.3	972.2	0.43	-0.11	-0.42	9.2	-8.8
14,043.0	88.20	358.90	12,797.5	1,108.3	971.4	0.92	0.51	0.77	10.8	-8.3
14,138.0	88.10	359.30	12,800.6	1,203.2	969.9	0.43	-0.11	0.42	14.8	-7.7
14,233.0	88.30	359.50	12,803.6	1,298.2	968.9	0.30	0.21	0.21	18.7	-7.5
14,328.0	91.70	359.50	12,803.6	1,393.1	968.1	3.58	3.58	0.00	19.6	-7.5
14,423.0	90.70	359.70	12,801.6	1,488.1	967.4	1.07	-1.05	0.21	18.5	-7.7
14,518.0	89.60	359.60	12,801.3	1,583.1	966.8	1.16	-1.16	-0.11	19.2	-7.9
14,614.0	88.50	1.00	12,802.9	1,679.1	967.3	1.85	-1.15	1.46	21.7	-9.3



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14,708.0	90.30	0.90	12,803.9	1,773.1	988.9	1.92	1.91	-0.11	23.8	-11.6	
14,803.0	91.80	1.60	12,802.1	1,868.0	971.0	1.74	1.58	0.74	22.7	-14.5	
14,898.0	90.70	1.60	12,800.1	1,963.0	973.6	1.16	-1.16	0.00	21.6	-18.0	
14,993.0	92.10	1.30	12,797.8	2,057.9	976.0	1.51	1.47	-0.32	20.1	-21.3	
15,088.0	91.00	0.80	12,795.2	2,152.9	977.8	1.27	-1.16	-0.53	18.5	-23.8	
15,183.0	90.00	359.00	12,794.4	2,247.9	977.6	2.17	-1.05	-1.89	18.5	-24.5	
15,278.0	91.90	358.90	12,792.8	2,342.8	975.9	2.00	2.00	-0.11	17.9	-23.6	
15,373.0	88.50	357.80	12,792.5	2,437.8	973.1	3.76	-3.58	-1.16	18.4	-21.7	
15,468.0	89.50	359.40	12,794.1	2,532.7	970.8	1.99	1.05	1.68	21.0	-20.2	
15,563.0	86.20	358.50	12,797.7	2,627.6	967.4	4.62	-3.47	-3.05	25.5	-17.6	
15,658.0	83.90	355.00	12,805.9	2,721.9	960.4	2.89	-2.42	-1.58	34.5	-11.5	
15,753.0	87.10	354.20	12,813.3	2,816.2	951.5	3.47	3.37	-0.84	42.9	-3.4	
15,848.0	91.30	356.60	12,814.6	2,910.9	943.9	5.09	4.42	2.53	45.1	3.4	
15,943.0	88.00	356.60	12,815.2	3,005.7	938.2	3.47	-3.47	0.00	46.6	8.2	
16,039.0	89.80	358.00	12,817.1	3,101.6	933.7	2.38	1.87	1.46	49.4	11.9	
16,134.0	88.70	0.10	12,818.3	3,196.5	932.1	2.50	-1.16	2.21	51.5	12.7	
16,229.0	89.90	0.20	12,819.5	3,291.5	932.4	1.27	1.26	0.11	53.6	11.6	
16,324.0	97.40	0.90	12,813.4	3,386.3	933.3	7.93	7.89	0.74	48.4	9.9	
16,402.0	99.40	1.10	12,802.0	3,483.4	934.6	2.56	2.56	0.26	37.8	7.9	
16,434.4	97.66	1.27	12,797.2	3,495.5	935.3	5.39	-5.37	0.53	33.3	6.9	
TGT 1 (LB 9 Fed #704H)											
16,497.0	94.30	1.60	12,790.7	3,557.7	936.9	5.39	-5.37	0.52	27.4	4.8	
16,592.0	90.80	0.50	12,786.5	3,652.5	938.6	3.86	-3.68	-1.16	24.1	2.2	
16,687.0	90.20	0.80	12,785.7	3,747.5	939.5	0.64	-0.63	0.11	24.2	0.5	
16,782.0	87.50	0.30	12,787.6	3,842.5	940.3	2.86	-2.84	-0.32	27.0	-1.1	
16,877.0	87.20	359.30	12,792.0	3,937.4	939.9	1.10	-0.32	-1.05	32.4	-1.6	
16,972.0	87.10	359.00	12,796.7	4,032.3	938.5	0.33	-0.11	-0.32	38.0	-1.0	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3363.0usft
Site:	Lobo Blanco 9 Fed	MD Reference:	KB = 25 @ 3363.0usft
Well:	#704H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
17,068.0	90.20	0.10	12,788.9	4,128.2	937.8	3.43	3.23	1.15	41.2	-1.1	
17,162.0	90.00	1.10	12,788.8	4,222.2	938.8	1.08	-0.21	1.06	42.0	-2.9	
17,258.0	88.70	2.40	12,799.9	4,318.2	941.7	1.91	-1.35	1.35	44.1	-6.7	
17,352.0	88.00	1.60	12,802.6	4,412.1	945.0	1.13	-0.74	-0.85	47.7	-10.8	
17,447.0	89.10	0.30	12,805.0	4,507.0	946.5	1.79	1.16	-1.37	51.0	-13.2	
17,542.0	87.20	0.60	12,808.0	4,602.0	947.3	2.02	-2.00	0.32	55.0	-14.8	
17,638.0	93.10	3.00	12,807.8	4,695.9	950.2	6.78	6.28	2.55	55.7	-18.5	
17,731.0	87.60	359.50	12,807.2	4,790.8	952.3	6.86	-5.79	-3.68	56.1	-21.5	
17,826.0	90.40	358.70	12,808.9	4,885.8	950.8	3.07	2.95	-0.84	58.7	-20.8	
17,921.0	91.30	358.60	12,807.5	4,980.7	948.6	0.95	0.95	-0.11	58.2	-19.4	
18,016.0	90.80	358.00	12,805.7	5,075.7	945.8	0.82	-0.53	-0.83	57.4	-17.4	
18,111.0	91.20	358.30	12,804.1	5,170.6	942.7	0.53	0.42	0.32	56.7	-15.2	
18,206.0	91.60	359.10	12,801.7	5,265.5	940.5	0.94	0.42	0.84	55.3	-13.9	
18,300.0	90.50	359.00	12,800.0	5,359.5	939.0	1.18	-1.17	-0.11	54.5	-13.1	
18,395.0	92.90	358.90	12,797.2	5,454.4	937.2	2.53	2.53	-0.11	52.6	-12.2	
18,454.1	93.27	359.34	12,794.0	5,513.5	936.3	0.97	0.63	0.74	50.0	-11.8	
TGT 2 (LB 9 Fed #704H)											
18,490.0	93.50	359.60	12,791.9	5,549.3	936.0	0.97	0.63	0.74	48.4	-11.8	
18,585.0	91.40	358.00	12,787.8	5,644.2	934.0	2.78	-2.21	-1.68	45.7	-10.6	
18,681.0	90.90	357.00	12,785.9	5,740.1	929.8	1.16	-0.52	-1.04	45.2	-7.3	
18,776.0	91.20	356.60	12,784.2	5,834.9	924.5	0.53	0.32	-0.42	44.9	-2.8	
18,871.0	90.60	356.60	12,782.8	5,929.7	918.9	0.74	-0.74	0.00	44.8	2.0	
18,965.0	90.60	356.50	12,781.9	6,023.6	914.9	2.02	0.11	2.02	45.3	5.2	
19,060.0	88.50	358.60	12,782.6	6,118.6	912.5	2.21	-2.21	0.11	47.4	6.8	
19,156.0	88.20	358.00	12,785.4	6,214.5	909.6	0.70	-0.31	-0.62	51.6	8.8	
19,250.0	88.80	358.10	12,787.8	6,308.4	906.4	0.65	0.64	0.11	55.4	11.1	
19,346.0	87.60	357.80	12,790.8	6,404.3	903.0	1.29	-1.25	-0.31	59.8	13.7	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3363.0usft
Site:	Lobo Blanco 9 Fed	MD Reference:	KB = 25 @ 3363.0usft
Well:	#704H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	EW (usft)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
19,441.0	89.70	357.90	12,793.1	6,499.2	899.4	2.21	2.21	0.11	63.4	16.4	
19,536.0	91.30	358.70	12,792.3	6,594.2	896.6	1.88	1.68	0.84	64.0	18.4	
19,632.0	93.40	1.10	12,788.3	6,690.1	896.4	3.32	2.19	2.50	61.4	17.8	
19,727.0	93.70	0.70	12,782.4	6,784.9	897.9	0.53	0.32	-0.42	56.9	15.5	
19,822.0	91.60	1.60	12,778.0	6,879.7	899.8	2.40	-2.21	0.95	53.9	12.8	
19,830.8	91.60	1.53	12,777.8	6,888.6	900.1	0.84	0.00	-0.84	53.8	12.4	
TGT 3 (LB 9 Fed #704H)											
19,917.0	91.60	0.80	12,775.4	6,974.7	901.8	0.84	0.00	-0.84	52.6	9.9	
20,012.0	90.70	0.10	12,773.5	7,069.7	902.6	1.20	-0.95	-0.74	51.9	8.3	
20,107.0	90.00	359.40	12,772.9	7,164.7	902.2	1.04	-0.74	-0.74	52.7	7.9	
20,202.0	89.50	358.50	12,773.3	7,259.6	900.4	1.08	-0.53	-0.95	54.3	8.8	
20,297.0	91.80	359.20	12,772.2	7,354.6	898.5	2.53	2.42	0.74	54.6	9.9	
20,392.0	92.30	359.10	12,768.8	7,449.5	897.1	0.54	0.53	-0.11	52.4	10.5	
20,487.0	90.50	357.60	12,768.5	7,544.5	894.4	2.47	-1.89	-1.58	51.4	12.4	
20,582.0	90.90	0.00	12,765.4	7,639.4	892.4	2.56	0.42	2.53	51.5	13.6	
20,677.0	90.90	1.60	12,763.9	7,734.4	893.7	1.68	0.00	1.68	51.3	11.4	
20,772.0	91.30	1.40	12,762.0	7,829.4	898.2	0.47	0.42	-0.21	50.8	8.1	
20,867.0	91.50	1.00	12,759.7	7,924.3	898.2	0.47	0.21	-0.42	49.7	5.3	
20,962.0	91.00	1.10	12,757.7	8,019.3	899.9	0.54	-0.53	0.11	48.9	2.7	
21,057.0	90.20	0.90	12,756.7	8,114.2	901.6	0.87	-0.84	-0.21	49.2	0.2	
21,152.0	90.20	1.60	12,756.3	8,209.2	903.6	0.74	0.00	0.74	50.2	-2.7	
21,247.0	89.70	1.80	12,756.4	8,304.2	906.5	0.57	-0.53	0.21	51.5	-6.3	
21,342.0	92.40	0.40	12,754.7	8,399.1	908.3	3.20	2.84	-1.47	51.1	-9.0	
21,437.0	93.00	0.30	12,750.2	8,494.0	908.9	0.64	0.63	-0.11	47.9	-10.4	
21,532.0	93.20	359.50	12,745.1	8,588.9	908.7	0.87	0.21	-0.84	44.0	-11.1	
21,627.0	92.60	359.20	12,740.2	8,683.8	907.6	0.71	-0.63	-0.32	40.5	-10.8	
21,722.0	93.80	359.80	12,734.9	8,778.6	906.8	1.41	1.26	0.63	36.5	-10.8	



Final PVA Report

Company:	EOG Resources - Midland					Local Co-ordinate Reference:	Well #704H				
Project:	Lea County, NM (NAD 83 NME)					TVD Reference:	KB = 25 @ 3363.0usft				
Site:	Lobo Blanco 9 Fed					MD Reference:	KB = 25 @ 3363.0usft				
Well:	#704H					North Reference:	Grid				
Wellbore:	OH					Survey Calculation Method:	Minimum Curvature				
Design:	OH					Database:	EDM 5000.14				

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
21,817.0	91.40	0.10	12,730.6	8,873.5	908.7	2.55	-2.53	0.32	33.4	-11.6	
21,812.0	91.40	359.20	12,728.3	8,968.5	908.1	0.95	0.00	-0.95	32.4	-11.6	
22,008.0	89.80	359.30	12,727.3	9,064.5	904.9	1.67	-1.67	0.10	32.7	-11.4	
22,054.2	89.28	359.01	12,727.7	9,110.7	904.2	1.32	-1.16	-0.63	33.7	-11.1	
TGT 4 (LB 9 Fed #704H)											
22,103.0	88.70	358.70	12,728.6	9,159.4	903.2	1.32	-1.16	-0.63	35.0	-10.6	
22,198.0	91.10	359.70	12,728.7	9,254.4	901.9	2.74	2.53	1.05	36.1	-10.1	
22,293.0	92.50	0.50	12,725.7	9,349.4	902.1	1.70	1.47	0.84	34.1	-11.1	
22,388.0	92.60	0.80	12,721.5	9,444.3	903.1	0.33	0.11	0.32	30.8	-13.0	
22,483.0	94.10	0.50	12,716.0	9,539.1	904.2	1.61	1.58	-0.32	28.1	-14.9	
22,578.0	91.30	359.20	12,711.5	9,634.0	904.0	3.25	-2.95	-1.37	22.8	-15.5	
22,681.0	88.70	357.10	12,711.5	9,738.9	900.6	3.24	-2.52	-2.04	23.6	-13.1	
22,776.0	87.10	354.80	12,715.0	9,831.6	893.9	2.95	-1.68	-2.42	28.0	-7.2	
22,871.0	87.00	355.10	12,719.9	9,926.1	885.6	0.33	-0.11	0.32	33.8	0.3	
22,965.0	86.00	354.70	12,725.6	10,019.5	877.2	1.15	-1.06	-0.43	40.5	7.8	
23,018.0	86.30	354.40	12,729.2	10,072.2	872.2	0.80	0.57	-0.57	44.6	12.4	
Final MWD Survey (MD=23018.0')											
23,075.3	86.30	354.40	12,732.8	10,129.1	868.6	0.00	0.00	0.00	48.8	17.5	
PBHL (LB 9 Fed #704H)											
23,078.0	86.30	354.40	12,733.0	10,131.8	868.4	0.00	0.00	0.00	49.0	17.7	
Final Projection to Bit (MD=23078.0')											



Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
12,833.7	12,535.7	-217.2	945.4	HL Crossing, MD:12633.7', TVD:12535.7', N/S:-217.2', E/W:945.4', INC:31.04
23,018.0	12,729.2	10,072.2	872.2	Final MWD Survey (MD=23018.0')
23,078.0	12,733.0	10,131.8	866.4	Final Projection to Bit (MD=23078.0')

Checked By: _____ Approved By: _____ Date: _____

Signed Kyle Maddox Date 11/19/2019



Lea County, NM (NAD 83 NME)

Lobo Blanco 9 Fed #704H

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: #704H

KB = 25 @ 3363.0ust 3338.0
Northing 383555.00 Easting 806012.00 Latitude 32° 3' 5.738 N Longitude 103° 28' 44.569 W

To convert a Magnetic Direction to a Grid Direction, Add 0.28°
To convert a Magnetic Direction to a True Direction, Add 0.73° East
To convert a True Direction to a Grid Direction, Subtract 0.45°

SECTION DETAILS

Sec	MD	Inc	Asl	TVD	+N-B	+E-W	Dleg	TFace	VFace	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1220.0	0.00	0.00	1220.0	0.0	0.0	0.00	0.00	0.0	
3	1669.8	9.00	104.77	1667.9	-9.0	34.1	2.00	104.77	-4.0	
4	7687.7	9.00	104.77	7692.1	-248.0	940.9	0.00	0.00	-168.3	
5	8117.5	0.00	0.00	8040.0	-257.0	975.0	2.00	180.00	-171.3	
6	12395.1	0.00	0.00	12317.8	-257.0	975.0	0.00	0.00	-171.3	KOP (LB 9 Fed #704H)
7	13149.8	90.54	359.50	12795.0	225.0	970.8	12.00	359.50	308.5	
8	18419.2	90.54	359.50	12764.0	3491.3	942.2	0.00	0.00	3580.0	TGT 1 (LB 9 Fed #704H)
9	18417.3	90.57	359.50	12764.0	3492.4	942.2	2.00	0.00	3581.1	
10	18435.5	90.57	359.50	12744.0	8510.5	924.5	0.00	0.00	8570.0	TGT 2 (LB 9 Fed #704H)
11	18448.9	90.83	359.50	12743.8	8823.8	924.4	2.00	0.00	8553.3	
12	19812.1	90.83	359.50	12724.0	8888.9	912.5	0.00	0.00	8940.0	TGT 3 (LB 9 Fed #704H)
13	19815.1	90.77	359.50	12724.0	8889.9	912.5	2.00	-180.00	8943.1	
14	22036.5	90.77	359.50	12694.0	9110.9	893.1	0.00	0.00	9154.0	TGT 4 (LB 9 Fed #704H)
15	22047.1	90.56	359.50	12693.9	9121.6	893.0	2.00	-180.00	9154.7	
16	23059.6	90.56	359.50	12684.0	10134.0	884.1	0.00	0.00	10172.5	PBHL (LB 9 Fed #704H)

CASINO DETAILS

No casing data is available

WELLBORE CASINO DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-B	+E-W	Northing	Easting
KOP (LB 9 Fed #704H)	12317.8	-257.0	975.0	383225.00	806397.00
TGT 1 (LB 9 Fed #704H)	12764.0	3491.3	942.2	387048.30	806954.21
TGT 2 (LB 9 Fed #704H)	12744.0	8510.5	924.5	390965.00	806938.05
TGT 3 (LB 9 Fed #704H)	12724.0	8888.9	912.5	390441.80	806924.51
TGT 4 (LB 9 Fed #704H)	12694.0	9110.9	893.1	392555.30	806905.05
PBHL (LB 9 Fed #704H)	12684.0	10134.0	884.1	392525.00	806906.10
FTP (LB 9 Fed #704H)	12785.0	-217.0	975.0	383335.00	806387.00

Lobo Blanco 9 Fed #704H Plan #1

