

HOBBS OCD

AUG 19 2019

RECEIVED



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Della 29 Fed Com

#603H

OH

Design: OH

Final PVA Report

30 January, 2019



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #803H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Site:	Della 29 Fed Com	MD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Well:	#803H	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	Della 29 Fed Com		
Site Position:		Northing:	560,090.00 usft
From:	Map	Easting:	772,794.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 32' 15.008 N
		Longitude:	103° 34' 56.155 W
		Grid Convergence:	0.40 "

Well	#803H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 32' 15.008 N
		Longitude:	103° 34' 56.143 W
		Ground Level:	3,716.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/7/2019	6.81	60.33	47,959.86139848

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	2.77	

Survey Program	Date:	1/30/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
255.0	16,122.0	Total MWD #1 (OH)	MWD	OWSG MWD - Standard	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #803H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Site:	Della 29 Fed Com	MD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Well:	#803H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Databases:	EDM 5000.14

Survey											
MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	Olleg (°/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
255.0	0.30	89.00	255.0	0.0	0.7	0.12	0.12	0.00	-0.7	0.0	
442.0	0.30	264.40	442.0	0.0	0.7	0.32	0.00	93.80	0.7	0.1	
617.0	1.00	298.20	617.0	0.6	-1.2	0.44	0.40	18.17	-1.3	0.0	
805.0	1.40	320.50	804.9	3.1	-4.1	0.34	0.21	12.93	-5.0	1.2	
899.0	1.40	315.50	898.9	4.8	-5.6	0.13	0.00	-5.32	-7.4	0.6	
984.0	1.20	317.00	983.9	6.4	-7.1	0.21	-0.21	1.58	-9.5	0.9	
1,182.0	0.80	312.30	1,181.9	8.7	-9.4	0.22	-0.21	-2.50	-12.8	-0.1	
1,372.0	0.50	305.10	1,371.9	10.1	-11.1	0.16	-0.16	-3.79	-14.9	-1.8	
1,466.0	0.20	300.40	1,465.8	10.4	-11.6	0.32	-0.32	-5.00	-15.2	-3.1	
1,561.0	0.20	228.30	1,560.8	10.3	-11.8	0.25	0.00	-75.89	-2.0	-15.6	
1,655.0	0.10	258.40	1,654.8	10.2	-12.0	0.13	-0.11	32.02	-9.7	-12.4	
1,680.0	0.10	205.10	1,679.8	10.2	-12.1	0.36	0.00	-213.20	4.1	-15.3	
1,751.0	0.30	145.90	1,750.8	10.0	-12.0	0.37	0.28	-83.38	15.0	-4.3	
1,845.0	0.80	145.40	1,844.8	9.2	-11.5	0.53	0.53	-0.53	14.1	-4.2	
1,940.0	0.80	131.10	1,939.8	8.3	-10.6	0.21	0.00	-15.05	13.4	-0.7	
2,034.0	0.80	131.30	2,033.8	7.4	-9.6	0.00	0.00	0.21	12.1	-0.8	
2,129.0	0.80	132.60	2,128.8	6.5	-8.6	0.02	0.00	1.37	10.8	-1.1	
2,223.0	0.80	145.70	2,222.8	5.5	-7.8	0.19	0.00	13.94	8.9	-3.3	
2,318.0	0.80	145.90	2,317.8	4.4	-7.0	0.00	0.00	0.21	7.6	-3.3	
2,412.0	0.80	141.30	2,411.8	3.4	-6.3	0.07	0.00	-4.89	6.5	-2.8	
2,507.0	1.00	149.10	2,506.8	2.1	-5.4	0.25	0.21	8.21	4.6	-3.5	
2,601.0	1.00	144.70	2,600.8	0.8	-4.5	0.08	0.00	-4.88	3.2	-3.2	
2,696.0	1.00	135.00	2,695.7	-0.5	-3.5	0.18	0.00	-10.21	2.1	-2.8	
2,791.0	1.10	123.30	2,790.7	-1.6	-2.1	0.25	0.11	-12.32	0.9	-2.5	
2,885.0	1.40	114.50	2,884.7	-2.6	-0.3	0.38	0.32	-9.36	-0.8	-2.5	
2,979.0	1.70	107.60	2,978.7	-3.5	2.1	0.38	0.32	-7.34	-3.0	-2.7	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #603H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Site:	Della 29 Fed Com	MD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Well:	#603H	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)	DLeg (°/100usft)	BuId (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
3,073.0	2.00	103.00	3,072.6	-4.2	5.0	0.36	0.32	-4.89	-5.8	-3.0	
3,168.0	2.30	96.10	3,167.6	-4.8	8.5	0.42	0.32	-7.26	-9.0	-3.9	
3,283.0	3.10	90.70	3,262.5	-5.1	13.0	0.88	0.84	-5.68	-13.0	-4.9	
3,357.0	3.20	92.30	3,356.3	-5.2	18.1	0.14	0.11	1.70	-18.3	-4.5	
3,452.0	2.80	92.20	3,451.2	-5.4	23.2	0.32	-0.32	-0.11	-23.4	-4.5	
3,546.0	3.00	96.40	3,545.1	-5.8	28.0	0.25	0.11	4.47	-27.9	-2.3	
3,640.0	3.70	117.10	3,638.9	-7.4	33.2	1.47	0.74	22.02	-28.7	8.9	
3,735.0	5.50	129.20	3,733.6	-11.7	39.4	2.14	1.89	12.74	-27.1	14.6	
3,829.0	6.00	133.80	3,827.1	-17.9	46.4	0.72	0.53	4.89	-28.0	15.2	
3,924.0	6.20	135.70	3,921.6	-25.0	53.6	0.30	0.21	2.00	-25.9	13.9	
4,018.0	6.10	133.60	4,015.0	-32.1	60.8	0.28	-0.11	-2.23	-26.8	10.9	
4,194.0	6.70	131.80	4,189.9	-45.4	75.2	0.36	0.34	-1.02	-28.6	6.8	
4,289.0	6.70	131.30	4,284.3	-52.8	83.5	0.08	0.00	-0.53	-30.0	5.0	
4,383.0	6.70	132.40	4,377.6	-60.1	91.7	0.14	0.00	1.17	-31.2	4.0	
4,478.0	6.40	131.90	4,472.0	-67.3	99.7	0.32	-0.32	-0.53	-32.3	2.0	
4,572.0	6.00	130.20	4,565.5	-74.0	107.4	0.47	-0.43	-1.81	-32.7	-0.4	
4,667.0	6.20	130.90	4,659.8	-80.6	115.0	0.22	0.21	0.74	-33.0	-1.4	
4,761.0	6.80	134.80	4,753.3	-87.8	122.8	0.78	0.64	4.15	-34.0	-0.8	
4,856.0	6.70	131.60	4,847.7	-95.5	130.9	0.41	-0.11	-3.37	-35.3	-4.7	
5,045.0	6.90	134.70	5,035.3	-110.8	147.3	0.22	0.11	1.64	-38.6	-8.3	
5,140.0	6.90	138.40	5,129.7	-119.1	155.1	0.47	0.00	3.89	-40.8	-6.2	
5,234.0	6.60	137.60	5,223.0	-127.3	162.5	0.33	-0.32	-0.85	-42.2	-9.4	
5,419.0	7.70	129.20	5,406.6	-143.0	179.3	0.82	0.59	-4.54	-44.2	-19.3	
5,514.0	7.80	128.00	5,500.7	-150.9	189.3	0.20	0.11	-1.26	-46.7	-21.3	
5,703.0	7.90	130.70	5,687.9	-167.3	209.2	0.20	0.05	1.43	-53.9	-21.3	
5,797.0	6.50	122.80	5,781.2	-174.4	218.6	1.82	-1.49	-8.40	-52.4	-29.4	
5,892.0	6.40	122.40	5,875.6	-180.2	227.6	0.12	-0.11	-0.42	-53.0	-29.8	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #803H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Site:	Della 28 Fed Com	MD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Well:	#803H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Asd (grid_north_xdmm)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
5,986.0	5.10	110.80	5,969.1	-184.4	235.9	1.85	-1.38	-12.34	-45.6	-38.8	
6,081.0	5.00	118.70	6,063.8	-187.9	243.5	0.74	-0.11	8.32	-48.9	-31.0	
6,175.0	4.20	87.10	6,157.5	-189.7	250.5	2.79	-0.85	-33.62	-24.5	-48.4	
6,365.0	4.30	81.40	6,346.9	-188.3	264.5	0.23	0.05	-3.00	-18.6	-38.2	
6,460.0	3.10	73.40	6,441.7	-187.0	270.5	1.37	-1.28	-8.42	-12.7	-33.5	
6,648.0	1.10	53.30	6,629.6	-184.5	276.8	1.12	-1.06	-10.69	0.1	-19.2	
6,742.0	0.80	284.10	6,723.6	-183.8	276.8	1.92	-0.21	-137.45	6.0	8.7	
6,831.0	1.00	274.00	6,812.8	-183.3	273.7	0.10	0.05	-5.34	-6.8	5.0	
7,119.0	1.00	259.20	7,100.5	-183.5	270.5	0.14	0.00	-7.87	-11.2	2.5	
7,214.0	1.00	257.20	7,195.5	-183.9	268.9	0.04	0.00	-2.11	-12.9	2.0	
7,308.0	1.10	261.50	7,289.5	-184.2	267.2	0.14	0.11	4.57	-14.4	3.1	
7,402.0	1.10	251.20	7,383.5	-184.6	265.4	0.21	0.00	-10.96	-16.5	0.3	
7,497.0	1.20	239.00	7,478.5	-185.4	263.7	0.28	0.11	-12.84	-18.1	-3.4	
7,591.0	1.20	238.90	7,572.5	-186.4	262.0	0.00	0.00	-0.11	-20.1	-3.4	
7,686.0	1.10	241.60	7,667.4	-187.4	260.4	0.12	-0.11	2.84	-22.1	-2.5	
7,780.0	1.00	246.10	7,761.4	-188.1	258.8	0.14	-0.11	4.79	-24.0	-0.8	
7,874.0	1.00	248.00	7,855.4	-188.8	257.3	0.04	0.00	2.02	-25.6	0.2	
7,869.0	1.10	252.90	7,950.4	-189.3	255.7	0.14	0.11	5.16	-27.2	2.4	
8,063.0	0.60	330.20	8,044.4	-189.2	254.6	1.20	-0.53	82.23	-4.3	28.0	
8,252.0	0.70	16.30	8,233.4	-187.2	254.4	0.27	0.05	24.39	15.3	23.2	
8,347.0	0.70	11.90	8,328.4	-186.1	254.7	0.06	0.00	-4.63	12.4	24.3	
8,441.0	0.40	29.90	8,422.4	-185.2	255.0	0.36	-0.32	19.15	18.4	19.4	
8,536.0	0.20	105.70	8,517.4	-185.0	255.3	0.42	-0.21	79.79	23.1	-12.7	
8,630.0	0.30	121.30	8,611.4	-185.2	255.7	0.13	0.11	16.60	18.4	-18.4	
8,724.0	0.30	142.40	8,705.4	-185.5	256.0	0.12	0.00	22.45	10.1	-23.7	
8,819.0	0.20	183.80	8,800.4	-185.9	256.2	0.21	-0.11	43.58	-8.5	-24.3	
9,008.0	0.30	131.70	8,889.4	-186.5	256.5	0.13	0.05	-27.57	13.3	-21.9	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #603H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Site:	Della 29 Fed Com	MD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Well:	#603H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
ND (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)	
9,102.0	0.30	198.80	9,083.4	-186.9	256.6	0.34	0.00	69.26	-14.6	-21.0	
9,291.0	0.50	289.20	9,272.4	-187.1	255.7	0.31	0.11	48.89	-21.2	18.0	
9,480.0	0.10	128.50	9,461.4	-186.9	255.1	0.31	-0.21	-85.03	15.4	-22.4	
9,574.0	0.80	197.00	9,555.4	-187.6	254.9	0.82	0.74	72.87	-15.9	-22.4	
9,669.0	1.70	189.20	9,650.3	-189.6	254.5	0.98	0.95	-8.21	-14.7	-24.4	
9,763.0	1.90	194.90	9,744.3	-192.5	253.9	0.29	0.21	6.06	-20.0	-22.7	
9,857.0	1.10	198.10	9,838.2	-194.9	253.2	0.85	-0.85	1.28	-23.0	-22.3	
9,952.0	1.70	188.40	9,933.2	-197.2	252.8	0.66	0.63	-8.11	-22.1	-25.3	
10,047.0	1.00	65.90	10,028.2	-198.2	253.3	2.52	-0.74	-128.95	33.1	-6.3	
10,235.0	2.90	42.90	10,216.1	-194.1	258.1	1.07	1.01	-12.23	26.7	6.5	
10,329.0	1.50	45.60	10,310.0	-191.5	260.6	1.49	-1.49	2.87	23.3	5.4	
10,423.0	2.60	52.10	10,404.0	-189.3	263.1	1.19	1.17	6.91	20.4	2.9	
10,518.0	2.50	58.00	10,498.9	-186.9	266.6	0.30	-0.11	6.21	16.4	1.0	
10,622.0	6.30	351.70	10,602.6	-180.0	267.7	5.55	3.65	-63.75	-0.9	13.3	
10,655.2	11.11	349.70	10,635.4	-175.1	266.8	14.49	14.46	-6.01	-6.3	13.3	
KOP (Della 29 Fed Com #603H)											
10,669.0	13.10	349.30	10,648.9	-172.2	266.3	14.49	14.46	-2.91	-9.1	13.3	
10,716.0	20.00	349.40	10,693.9	-159.1	263.9	14.68	14.68	0.21	-19.6	14.0	
10,763.0	23.40	354.70	10,737.6	-141.9	261.5	8.34	7.23	11.28	-29.1	17.2	
10,785.4	23.60	356.87	10,767.3	-129.0	260.6	2.74	0.60	6.69	-34.8	18.7	
HL Crossing, MD:10785.4", TVD:10767.3", N/S:-129.0", EW:260.6", INC:23.60											
10,811.0	23.70	357.90	10,781.6	-122.7	260.3	2.74	0.67	6.61	-36.9	19.4	
10,858.0	25.80	1.10	10,824.3	-103.1	260.1	5.30	4.47	6.81	-41.2	21.4	
10,905.0	27.90	4.30	10,866.2	-81.9	261.1	5.42	4.47	6.81	-43.2	22.3	
10,952.0	30.60	8.90	10,907.2	-59.1	263.8	7.47	5.74	9.79	-42.6	22.3	
11,000.0	33.10	11.90	10,948.0	-34.2	268.4	6.16	5.21	6.25	-40.9	18.8	
11,094.0	35.00	16.40	11,025.9	16.8	281.3	3.36	2.02	4.79	-30.6	4.5	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #803H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Site:	Della 29 Fed Com	MD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Well:	#803H	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)	D/Leg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
11,153.8	39.24	8.86	11,073.6	51.9	289.4	9.80	7.09	-10.76	-19.0	-8.2	
FTP (Della 29 Fed Com #803H)											
11,188.0	41.80	6.80	11,099.6	73.9	292.7	9.80	7.49	-9.28	-11.0	-12.9	
11,235.0	46.10	2.50	11,133.4	106.4	295.3	11.13	9.15	-9.15	0.6	-16.6	
11,283.0	51.10	359.00	11,165.1	142.4	295.7	11.76	10.42	-7.29	12.4	-17.4	
11,330.0	57.70	356.00	11,192.5	180.5	294.0	14.97	14.04	-6.38	22.9	-15.5	
11,377.0	65.40	354.00	11,214.9	221.6	290.4	16.80	16.38	-4.26	30.9	-11.8	
11,424.0	73.80	352.00	11,231.2	265.3	285.0	18.31	17.87	-4.26	35.7	-8.6	
11,465.0	81.40	350.90	11,240.0	304.9	279.0	18.72	18.54	-2.68	37.1	-1.2	
11,567.0	89.50	351.30	11,248.1	405.3	263.3	7.95	7.94	0.39	38.8	12.7	
11,661.0	91.80	354.50	11,247.0	488.5	251.7	4.19	2.45	3.40	38.9	23.6	
11,756.0	94.60	356.60	11,241.7	593.1	244.3	3.68	2.95	2.21	34.7	30.3	
11,850.0	97.30	359.40	11,232.0	686.5	241.1	4.13	2.87	2.98	26.0	32.9	
11,944.0	100.60	2.90	11,217.2	779.3	242.9	5.23	3.72	3.72	12.0	30.4	
11,991.0	103.10	5.00	11,207.5	825.1	246.1	6.56	4.89	4.47	2.6	26.8	
12,086.0	103.40	6.40	11,185.7	917.1	255.3	1.47	0.32	1.47	-17.5	16.7	
12,134.0	97.00	6.10	11,177.2	964.1	260.4	13.35	-13.33	-0.62	-25.4	11.1	
12,228.0	88.20	4.70	11,172.9	1,057.5	269.2	9.48	-9.38	-1.49	-28.4	1.6	
12,323.0	82.60	4.50	11,180.6	1,151.8	276.8	5.90	-5.89	-0.21	-19.7	-6.8	
12,417.0	82.40	0.80	11,192.8	1,244.9	281.1	3.91	-0.21	-3.94	-6.2	-11.8	
12,512.0	81.90	359.00	11,205.8	1,339.0	281.0	1.95	-0.53	-1.89	7.8	-12.4	
12,606.0	86.80	356.10	11,215.1	1,432.4	277.0	6.05	5.21	-3.09	18.3	-9.2	
12,700.0	88.00	357.00	11,219.3	1,526.1	271.3	1.60	1.28	0.96	23.7	-4.3	
12,795.0	90.10	357.20	11,220.9	1,621.0	266.5	2.22	2.21	0.21	26.4	-0.3	
12,890.0	90.30	356.60	11,220.6	1,715.9	261.4	0.67	0.21	-0.63	27.2	4.1	
12,984.0	90.60	356.00	11,219.8	1,809.7	255.3	0.71	0.32	-0.64	27.6	9.4	
13,079.0	91.20	357.20	11,218.3	1,904.5	249.7	1.41	0.63	1.26	27.3	14.2	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #803H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Site:	Della 29 Fed Com	MD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Well:	#803H	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)	BuId (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
13,163.9	91.65	356.57	11,218.2	1,989.3	245.0	0.91	0.53	-0.74	28.3	18.1	
TOT#1 (Della 29 Fed Com #803H)											
13,173.0	91.70	356.50	11,218.0	1,998.3	244.5	0.91	0.53	-0.74	26.1	18.6	
13,267.0	91.90	358.80	11,213.0	2,092.2	240.6	2.45	0.21	2.45	24.8	21.7	
13,362.0	90.30	358.70	11,211.2	2,187.1	238.6	1.69	-1.68	-0.11	24.6	23.0	
13,456.0	90.20	358.40	11,210.8	2,281.1	236.2	0.34	-0.11	-0.32	25.8	24.6	
13,551.0	91.10	0.60	11,209.7	2,376.1	235.4	2.50	0.95	2.32	26.4	24.7	
13,645.0	89.40	1.40	11,208.3	2,470.1	237.0	2.00	-1.81	0.85	27.7	22.3	
13,740.0	89.60	1.00	11,210.1	2,565.0	239.0	0.47	0.21	-0.42	30.1	19.5	
13,835.0	89.80	0.80	11,210.6	2,660.0	240.5	0.30	0.21	-0.21	32.3	17.3	
13,929.0	90.20	0.60	11,210.6	2,754.0	241.6	0.48	0.43	-0.21	33.9	15.3	
14,023.0	90.60	0.30	11,210.0	2,848.0	242.4	0.53	0.43	-0.32	34.9	13.8	
14,118.0	90.90	0.60	11,208.7	2,943.0	243.1	0.45	0.32	0.32	35.3	12.3	
14,212.0	91.10	0.20	11,207.1	3,037.0	243.8	0.48	0.21	-0.43	35.4	10.8	
14,307.0	90.50	359.70	11,205.8	3,132.0	243.7	0.82	-0.63	-0.53	35.7	10.2	
14,401.0	89.70	358.70	11,205.6	3,226.0	242.4	1.36	-0.85	-1.06	37.2	10.7	
14,496.0	89.80	358.60	11,208.0	3,320.9	240.1	0.15	0.11	-0.11	39.2	12.2	
14,590.0	90.70	359.00	11,205.6	3,414.9	238.2	1.05	0.96	0.43	40.5	13.4	
14,684.0	90.90	358.50	11,204.3	3,508.9	236.1	0.57	0.21	-0.53	40.8	14.6	
14,779.0	91.10	358.10	11,202.6	3,603.8	233.3	0.47	0.21	-0.42	40.8	16.7	
14,873.0	90.60	357.70	11,201.2	3,697.8	229.9	0.68	-0.53	-0.43	41.1	19.3	
14,968.0	90.60	358.90	11,200.2	3,792.7	227.0	1.26	0.00	1.26	41.7	21.4	
15,062.0	90.60	358.30	11,199.2	3,886.7	224.7	0.64	0.00	-0.64	42.4	22.9	
15,156.0	91.40	0.40	11,197.6	3,980.7	223.7	2.39	0.85	2.23	42.4	23.2	
15,169.3	91.41	0.40	11,197.3	3,993.9	223.8	0.11	0.11	0.00	42.3	23.0	
TOT#2 (Della 29 Fed Com #803H)											
15,251.0	91.50	0.40	11,195.2	4,075.6	224.3	0.11	0.11	0.00	41.5	21.8	



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #603H
Project:	Laa County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Site:	Della 29 Fed Com	MD Reference:	KB = 25 @ 3741.0usft (H&P 444)
Well:	#603H	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)		
15,345.0	90.60	359.20	11,183.5	4,189.6	224.0	1.60	-0.96	-1.28	41.3	21.3		
15,440.0	90.30	358.90	11,192.7	4,264.6	222.4	0.45	-0.32	-0.32	42.0	22.1		
15,534.0	90.60	358.20	11,192.0	4,358.6	220.1	0.81	0.32	-0.74	42.8	23.7		
15,628.0	91.70	0.30	11,190.1	4,452.5	218.8	2.52	1.17	2.23	42.3	24.2		
15,722.0	92.30	0.20	11,186.8	4,546.5	219.2	0.65	0.64	-0.11	40.5	23.0		
15,816.0	90.40	0.30	11,184.6	4,640.4	219.6	2.02	-2.02	0.11	39.8	21.9		
15,910.0	90.50	0.60	11,183.9	4,734.4	220.4	0.34	0.11	0.32	40.6	20.3		
16,004.0	90.50	0.20	11,183.1	4,828.4	221.0	0.43	0.00	-0.43	41.2	18.9		
16,063.0	91.20	0.10	11,182.2	4,887.4	221.2	1.20	1.19	-0.17	41.3	18.3		
Final MWD Survey (MD=16063.0')												
16,121.5	91.20	0.10	11,181.0	4,945.9	221.3	0.00	0.00	0.00	41.0	17.7		
PBHL (Della 29 Fed Com #603H)												
16,122.0	91.20	0.10	11,180.9	4,946.4	221.3	0.00	0.00	0.00	41.0	17.7		
Final Projection to Bit (MD=16122.0')												

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
10,795.4	10,767.3	-129.0	260.6	HL Crossing, MD:10795.4', TVD:10767.3', N/S:-129.0', E/W:260.6', INC:23.60
16,063.0	11,182.2	4,887.4	221.2	Final MWD Survey (MD=16063.0')
16,122.0	11,180.9	4,946.4	221.3	Final Projection to Bit (MD=16122.0')

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



Lea County, NM (NAD 83 NME)

Della 29 Fed Com

#603H

H&P 444

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 8.41°
To convert a Magnetic Direction to a True Direction, Add 8.81° East
To convert a True Direction to a Grid Direction, Subtract 9.40°

WELL DETAILS: #603H

3718.0
KB = 25 @ 3741.0 (H&P 444)
Northing Easting Lat/Long
777795.00 32° 32' 15.00 N 103° 34' 50.10 W 8101

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSecl	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3485.0	0.00	0.00	3485.0	0.0	0.0	0.00	0.00	0.0	
3	3784.9	8.00	122.50	3784.4	-8.4	13.2	2.00	122.50	-7.8	
4	6673.0	8.00	122.50	6656.6	-170.6	267.8	0.00	0.00	-157.4	
5	6972.9	0.00	0.00	6956.0	-179.0	281.0	2.00	180.00	-165.2	
6	10653.4	0.00	0.00	10636.5	-179.0	281.0	0.00	0.00	-165.2	KOP (Della 29 Fed Com #603H)
7	11550.4	90.70	359.53	11209.4	400.9	276.2	10.00	359.53	413.8	TGT#1 (Della 29 Fed Com #603H)
8	13149.2	90.70	359.53	11190.0	1959.6	263.2	0.00	0.00	2000.0	
9	13184.3	91.00	359.53	11189.8	2004.7	263.1	2.00	0.00	2015.1	
10	15152.7	91.00	359.53	11155.0	3992.7	246.8	0.00	0.00	4000.0	TGT#2 (Della 29 Fed Com #603H)
11	15157.7	90.90	359.53	11154.9	3997.7	246.8	2.00	180.00	4005.0	
12	16105.2	90.90	359.53	11140.0	4945.0	239.0	0.00	0.00	4950.8	PBHL (Della 29 Fed Com #603H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
KOP (Della 29 Fed Com #603H)	10636.5	-179.0	281.0	858911.00	773074.00	Polygon
TGT#1 (Della 29 Fed Com #603H)	11140.0	400.9	276.2	860233.00	773204.00	Rectangle (Sides: L0.0 W0.0)
TGT#2 (Della 29 Fed Com #603H)	11155.0	3992.7	246.8	864082.70	773041.81	Point
TGT#3 (Della 29 Fed Com #603H)	11190.0	1959.6	263.2	862079.60	773058.21	Point
PTP (Della 29 Fed Com #603H)	11216.0	-125.0	281.0	859941.00	772074.00	Point

