



HOBBS OCD
OCT 10 2018
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Philly 31 Fed Com

#703H

OH

Design: OH

Midland PVA

16 August, 2018



Midland PVA

Company:	EOG Resources - Midland			Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)			TVD Reference:	KB = 25' @ 3390.0usft (H&P 642)
Site:	Philly 31 Fed Com			MD Reference:	KB = 25' @ 3390.0usft (H&P 642)
Well:	#703H			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	Philly 31 Fed Com				
Site Position:		Northing:	365,084.00 usft	Latitude:	32° 0' 3.819 N
From:	Map	Easting:	794,820.00 usft	Longitude:	103° 30' 56.229 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 "

Well	#703H					
Well Position	+N-S	0.0 usft	Northing:	365,096.00 usft	Latitude:	32° 0' 3.830 N
	+E-W	0.0 usft	Easting:	796,255.00 usft	Longitude:	103° 30' 39.564 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level:	3,365.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/19/2017	6.88	59.86	47,785.85016300

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	356.75	

Survey Program	Date 8/16/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
177.0	20,190.0	Gordon MWD (OH)	MWD	OWSG MWD - Standard	



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Well:	#703H	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)	Diag (°/100usft)	Buid (°/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
177.0	1.01	291.35	177.0	0.6	-1.5	0.57	0.57	0.00	-1.6	0.0	
326.0	1.10	290.48	326.0	1.5	-4.0	0.06	0.06	-0.58	-4.3	0.0	
507.0	0.65	299.96	506.9	2.7	-6.5	0.26	-0.25	5.24	-7.0	1.0	
687.0	0.72	273.90	686.9	3.3	-8.5	0.18	0.04	-14.48	-8.7	-2.7	
879.0	0.68	271.63	878.9	3.4	-10.9	0.03	-0.02	-1.18	-11.0	-3.1	
926.0	0.69	283.82	925.9	3.4	-11.4	0.31	0.02	25.94	-11.9	-0.6	
1,080.0	0.69	281.59	1,079.9	3.9	-13.3	0.02	0.00	-1.45	-13.8	-1.1	
1,268.0	0.64	272.63	1,267.9	4.1	-15.4	0.06	-0.03	-4.77	-15.6	-3.4	
1,456.0	0.52	268.17	1,455.9	4.1	-17.3	0.07	-0.06	-2.37	-17.2	-4.7	
1,643.0	0.56	259.90	1,642.9	4.0	-19.1	0.05	0.02	-4.42	-18.1	-7.2	
1,831.0	0.75	245.25	1,830.9	3.3	-21.1	0.13	0.10	-7.79	-17.8	-11.8	
2,018.0	0.25	186.35	2,017.9	2.4	-22.2	0.35	-0.27	-31.50	-0.1	-22.4	
2,206.0	0.44	122.63	2,205.9	1.6	-21.7	0.21	0.10	-33.89	19.1	-10.4	
2,394.0	0.56	100.56	2,393.8	1.0	-20.2	0.12	0.06	-11.74	20.0	-2.7	
2,582.0	0.79	99.49	2,581.8	0.6	-18.0	0.12	0.12	-0.57	17.8	-2.3	
2,770.0	1.04	97.31	2,769.8	0.2	-15.0	0.13	0.13	-1.16	14.9	-1.7	
2,957.0	1.14	102.14	2,956.8	-0.4	-11.5	0.07	0.05	2.58	11.2	-2.8	
3,145.0	1.31	99.12	3,144.7	-1.1	-7.6	0.10	0.09	-1.61	7.3	-2.3	
3,333.0	1.64	95.50	3,332.7	-1.7	-2.8	0.18	0.18	-1.93	2.6	-2.0	
3,521.0	1.66	91.25	3,520.6	-2.1	2.6	0.07	0.01	-2.26	-2.7	-2.0	
3,709.0	1.75	90.74	3,708.5	-2.2	8.2	0.05	0.05	-0.27	-8.3	-2.0	
3,896.0	1.86	92.97	3,895.4	-2.3	14.1	0.07	0.06	1.19	-14.2	-1.6	
4,084.0	1.25	94.23	4,083.3	-2.7	19.2	0.32	-0.32	0.67	-19.4	-1.2	
4,273.0	0.40	164.05	4,272.3	-3.4	21.4	0.62	-0.45	36.94	-9.2	19.7	
4,460.0	0.75	217.46	4,459.3	-5.0	20.9	0.32	0.19	28.56	8.7	19.6	
4,647.0	0.73	212.39	4,646.3	-7.0	19.5	0.04	-0.01	-2.71	4.5	20.2	



Midland PVA

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Site: Philly 31 Fed Com		MD Reference: KB = 25' @ 3390.0usft (H&P 642)	
Well: #703H		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)	EW (usft)	DLeg ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)	
4,835.0	0.79	186.91	4,834.3	-9.3	18.7	0.18	0.03	-13.55	-7.0	19.7	
5,023.0	1.10	164.03	5,022.3	-12.3	19.0	0.26	0.16	-12.17	-17.1	14.9	
5,157.0	1.32	163.45	5,156.2	-15.1	19.8	0.16	0.16	-0.43	-20.1	14.7	
5,278.0	1.21	152.50	5,277.2	-17.5	20.8	0.22	-0.09	-9.05	-25.2	10.4	
5,466.0	4.79	242.95	5,465.0	-22.9	14.7	2.63	1.90	48.11	8.7	26.4	
5,653.0	9.91	242.98	5,650.4	-33.7	-6.6	2.74	2.74	0.02	2.7	24.5	
5,839.0	13.25	241.12	5,832.6	-51.3	-39.5	1.81	1.80	-1.00	-5.6	21.8	
6,026.0	12.25	241.62	6,014.9	-71.1	-75.7	0.54	-0.53	0.27	-7.9	18.7	
6,214.0	12.20	241.63	6,198.7	-90.0	-110.7	0.03	-0.03	0.01	-8.3	15.4	
6,402.0	10.72	240.84	6,382.9	-108.0	-143.5	0.79	-0.79	-0.42	-6.3	12.2	
6,590.0	12.96	234.72	6,566.9	-128.7	-176.0	1.36	1.19	-3.26	-6.4	11.0	
6,777.0	12.31	235.53	6,749.4	-152.0	-209.5	0.36	-0.35	0.43	-7.8	12.2	
6,965.0	11.93	234.61	6,933.2	-174.6	-241.9	0.23	-0.20	-0.49	-7.9	13.3	
7,152.0	12.22	234.19	7,116.1	-197.4	-273.7	0.16	0.16	-0.22	-7.8	14.9	
7,340.0	11.04	232.94	7,300.2	-219.9	-304.2	0.64	-0.63	-0.66	-6.4	16.9	
7,527.0	9.07	233.00	7,484.3	-239.6	-330.3	1.05	-1.05	0.03	-0.1	19.5	
7,714.0	5.13	239.63	7,669.9	-252.7	-349.2	2.15	-2.11	3.55	5.6	19.8	
7,902.0	1.15	345.51	7,857.6	-255.1	-357.0	2.96	-2.12	56.32	15.2	-10.6	
8,089.0	0.96	1.87	8,044.6	-251.7	-357.4	0.19	-0.10	8.75	8.3	-13.9	
8,277.0	0.45	315.06	8,232.6	-249.6	-357.9	0.39	-0.27	-24.90	14.0	-4.6	
8,465.0	0.20	342.17	8,420.6	-248.8	-358.5	0.15	-0.13	14.42	9.3	-10.1	
8,652.0	0.40	218.01	8,607.6	-249.0	-359.0	0.29	0.11	-66.40	2.7	13.2	
8,840.0	0.68	204.27	8,795.5	-250.5	-359.9	0.16	0.15	-7.31	-2.3	13.3	
9,027.0	0.61	222.76	8,982.5	-252.3	-361.0	0.12	-0.04	9.89	0.0	13.6	
9,214.0	0.74	217.14	9,169.5	-254.0	-362.4	0.08	0.07	-3.01	-3.5	13.5	
9,409.0	0.88	232.57	9,364.5	-255.9	-364.3	0.13	0.07	7.91	-2.5	14.3	
9,596.0	0.87	216.33	9,551.5	-257.9	-366.3	0.13	-0.01	-8.66	-9.2	12.6	



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Well:	#703H	North Reference:	Grd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey	MD (ust)	Inc (°)	Adj (feet/m)	TVD (ust)	N/S (ust)	EW (ust)	D.Leg. (°/100ust)	Built (°/100ust)	Turn (°/10ust)	High to Plan (ust)	Right to Plan (ust)
	9,784.0	1.07	223.60	9,739.5	-260.3	-368.4	0.12	0.11	3.87	-10.7	13.8
	9,972.0	0.76	248.46	9,927.4	-262.0	-370.7	0.26	-0.16	13.22	-6.8	17.8
	10,159.0	2.28	298.61	10,114.4	-260.8	-375.2	1.00	0.81	25.75	4.2	17.8
	10,347.0	0.76	341.02	10,302.3	-258.0	-378.0	0.97	-0.81	23.62	11.6	12.4
	10,534.0	0.30	238.33	10,488.3	-257.1	-379.8	0.47	-0.25	-54.91	-14.9	7.3
	10,722.0	0.72	230.76	10,677.3	-256.1	-381.1	0.23	0.22	-4.03	-17.4	5.3
	10,888.0	0.03	176.88	10,843.3	-256.8	-381.9	0.42	-0.42	-32.46	-15.1	-11.8
	11,003.0	0.24	339.49	10,958.3	-256.6	-382.0	0.23	0.16	141.40	10.7	15.8
	11,190.0	0.89	215.29	11,145.3	-259.4	-383.0	0.56	0.35	-66.42	-20.3	-0.3
	11,378.0	1.71	167.34	11,333.2	-263.3	-383.2	0.69	0.44	-25.51	-17.1	-16.4
	11,566.0	1.50	233.73	11,521.2	-267.5	-384.6	0.94	-0.11	35.31	-25.5	11.7
	11,754.0	2.19	263.74	11,709.1	-269.4	-390.1	0.62	0.37	15.96	-21.9	24.1
	11,941.0	2.36	261.77	11,895.9	-270.3	-397.5	0.10	0.08	-1.05	-30.1	23.2
	12,036.0	2.10	263.09	11,990.9	-270.8	-401.2	0.28	-0.27	1.39	-33.3	24.0
	12,147.0	2.23	275.41	12,101.8	-270.8	-405.3	0.43	0.12	11.10	-31.6	31.0
	12,240.0	3.76	333.54	12,194.7	-268.1	-405.5	5.59	1.65	127.02	40.0	14.9
	12,287.0	4.20	33.94	12,241.6	-265.4	-403.6	0.94	0.94	0.85	36.8	14.6
	12,334.0	9.49	10.65	12,288.2	-260.2	-402.0	12.49	11.26	-49.55	23.7	27.1
	12,381.0	17.14	3.75	12,334.0	-249.4	-400.8	16.60	16.28	-14.68	14.9	28.8
	12,428.0	24.60	2.35	12,377.8	-232.7	-399.9	15.91	15.87	-2.98	7.1	28.6
	12,475.0	29.06	2.60	12,419.8	-211.5	-399.0	9.49	9.49	0.53	-0.2	27.9
	12,510.9	33.22	3.32	12,450.5	-193.0	-398.1	11.64	11.59	2.00	-5.2	27.1
FTP Crossing 12510.9' MD: 12450.5' TVD: -193.0' -398.1' 33.22											
	12,522.0	34.51	3.51	12,459.7	-166.8	-397.7	11.64	11.60	1.72	-6.8	26.8
	12,568.0	38.70	3.32	12,496.6	-159.4	-396.1	9.11	9.11	-0.41	-13.1	25.3
	12,615.0	43.23	3.03	12,532.1	-128.7	-394.4	9.65	9.64	-0.62	-18.5	23.5
	12,662.0	47.50	2.81	12,565.1	-95.3	-392.7	9.09	9.09	-0.47	-22.7	21.6



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Site:	Philly 31 Fed Com	MD Reference:	KB = 25' @ 3390.0usft (H&P 642)
Well:	#703H	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)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
12,709.0	51.62	1.72	12,595.6	-59.6	-391.2	8.94	8.77	-2.32	-25.6	19.7	
12,755.0	55.71	1.16	12,622.9	-22.5	-390.3	8.95	8.89	-1.22	-26.9	18.3	
12,802.0	59.40	1.33	12,648.1	17.1	-389.5	7.86	7.85	0.36	-26.4	17.2	
12,849.0	62.86	3.05	12,670.8	58.2	-387.9	8.03	7.36	3.66	-23.7	15.5	
12,896.0	68.04	5.08	12,690.3	100.9	-384.8	11.70	11.02	4.32	-19.9	12.2	
12,927.0	70.46	4.52	12,701.3	129.8	-382.4	7.99	7.81	-1.81	-16.9	9.4	
12,959.0	74.94	3.44	12,710.8	160.2	-380.3	14.37	14.00	-3.37	-13.6	6.9	
12,990.0	78.84	2.91	12,717.8	190.4	-378.6	12.69	12.58	-1.71	-10.5	4.9	
13,021.0	82.27	1.39	12,722.9	220.9	-377.5	12.08	11.06	-4.90	-7.4	3.5	
13,052.0	86.55	359.15	12,725.9	251.8	-377.3	15.57	13.81	-7.23	-4.6	3.2	
13,084.0	89.08	357.88	12,727.1	283.7	-378.2	8.85	7.91	-3.97	-3.5	3.8	
13,123.0	92.83	357.64	12,726.5	322.7	-379.7	9.84	9.62	-0.62	-4.3	5.1	
13,186.0	94.66	358.95	12,722.4	385.5	-381.6	3.57	2.90	2.08	-8.6	6.5	
13,280.0	96.43	0.98	12,713.3	479.1	-381.6	2.86	1.88	2.16	-18.0	6.0	
13,374.0	95.05	2.44	12,703.9	572.5	-378.8	2.13	-1.47	1.55	-27.7	2.6	
13,454.0	91.43	3.65	12,699.4	652.3	-374.6	4.77	-4.52	1.51	-32.5	-2.2	
13,468.0	89.38	3.42	12,699.3	666.3	-373.7	14.73	-14.64	-1.64	-32.6	-3.1	
13,499.0	86.19	4.44	12,700.5	697.2	-371.6	10.80	-10.29	3.29	-31.5	-5.4	
13,530.0	85.88	4.69	12,702.6	728.0	-369.1	1.28	-1.00	0.81	-29.5	-8.1	
13,561.0	86.41	5.22	12,704.7	758.8	-366.5	2.42	1.71	1.71	-27.5	-10.9	
13,624.0	87.20	1.52	12,708.2	821.6	-362.8	6.00	1.25	-5.87	-24.2	-15.1	
13,655.0	87.56	1.40	12,709.6	852.5	-362.0	1.22	1.16	-0.39	-22.9	-16.0	
13,749.0	87.79	0.39	12,713.4	946.5	-360.5	1.10	0.24	-1.07	-19.3	-18.1	
13,842.0	88.04	0.22	12,716.8	1,039.4	-360.0	0.33	0.27	-0.18	-16.3	-19.2	
13,936.0	89.33	0.18	12,719.0	1,133.4	-359.7	1.37	1.37	-0.04	-14.4	-20.1	
14,029.0	89.52	0.32	12,719.9	1,226.4	-359.3	0.25	0.20	0.15	-13.8	-21.2	
14,123.0	90.03	0.35	12,720.3	1,320.4	-358.7	0.54	0.54	0.03	-13.7	-22.3	



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Well:	#703H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
ND (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D Leg (°/100usft)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
14,217.0	90.31	0.66	12,720.0	1,414.4	-357.9	0.44	0.30	0.33	-14.2	-23.7	
14,311.0	90.03	358.80	12,719.7	1,508.3	-358.3	2.00	-0.30	-1.98	-14.7	-23.9	
14,405.0	90.06	357.83	12,719.6	1,602.3	-361.1	1.03	0.03	-1.03	-15.0	-21.7	
14,498.0	91.06	358.12	12,718.7	1,695.2	-364.4	1.12	1.08	0.31	-16.1	-19.0	
14,592.0	91.57	358.87	12,716.6	1,789.2	-366.9	0.96	0.54	0.80	-18.5	-17.2	
14,686.0	91.46	1.54	12,714.1	1,883.1	-366.5	2.84	-0.12	2.84	-21.2	-18.1	
14,780.0	89.86	1.93	12,713.0	1,977.1	-363.7	1.75	-1.70	0.41	-22.5	-21.6	
14,874.0	87.65	358.27	12,715.0	2,071.0	-363.5	4.55	-2.35	-3.89	-20.6	-22.4	
14,967.0	88.65	359.14	12,718.0	2,164.0	-365.6	1.42	1.08	0.94	-17.8	-20.9	
15,060.0	89.94	359.36	12,719.2	2,257.0	-366.8	1.41	1.39	0.24	-16.9	-20.2	
15,154.0	91.54	0.24	12,718.0	2,350.9	-367.2	1.94	1.70	0.94	-18.3	-20.5	
15,248.0	90.87	0.71	12,716.0	2,444.9	-366.4	0.87	-0.71	0.50	-20.5	-21.9	
15,342.0	89.24	0.72	12,715.9	2,538.9	-365.2	1.73	-1.73	0.01	-20.8	-23.7	
15,436.0	86.83	1.09	12,719.1	2,632.8	-363.7	2.59	-2.56	0.39	-17.8	-25.7	
15,530.0	86.97	358.77	12,724.2	2,726.7	-363.8	2.47	0.15	-2.47	-12.9	-26.3	
15,623.0	88.65	357.51	12,727.8	2,819.6	-366.9	2.26	1.81	-1.35	-9.6	-23.8	
15,716.0	89.50	357.97	12,729.3	2,912.5	-370.5	1.04	0.91	0.49	-8.3	-20.8	
15,810.0	90.34	358.70	12,729.4	3,006.4	-373.3	1.18	0.89	0.78	-8.4	-18.6	
15,904.0	89.19	359.57	12,729.8	3,100.4	-374.7	1.53	-1.22	0.93	-8.2	-17.8	
15,998.0	89.16	0.18	12,731.1	3,194.4	-374.9	0.65	-0.03	0.65	-7.1	-18.2	
16,092.0	93.28	359.38	12,729.1	3,288.4	-375.2	4.46	4.38	-0.85	-9.3	-18.5	
16,186.0	92.30	358.84	12,724.6	3,382.2	-376.7	1.19	-1.04	-0.57	-14.0	-17.6	
16,279.0	90.73	358.19	12,722.1	3,475.2	-379.1	1.83	-1.69	-0.70	-16.7	-15.8	
16,373.0	90.95	1.18	12,720.7	3,569.2	-379.6	3.19	0.23	3.18	-18.3	-15.9	
16,466.0	89.19	0.55	12,720.6	3,662.1	-378.2	2.01	-1.89	-0.68	-18.5	-17.9	
16,560.0	89.78	359.45	12,721.5	3,756.1	-378.2	1.33	0.63	-1.17	-17.8	-18.5	
16,654.0	88.35	359.58	12,723.0	3,850.1	-379.0	1.53	-1.52	0.14	-16.4	-18.3	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3390.0usft (H&P 642)
Site:	Philly 31 Fed Com	MD Reference:	KB = 25' @ 3390.0usft (H&P 642)
Well:	#703H	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)
16,748.0	87.20	359.29	12,726.6	3,944.0	-379.9	1.26	-1.22	-0.31	-12.9	-18.0
16,842.0	87.53	356.85	12,731.0	4,037.9	-383.1	2.62	0.35	-2.60	-8.7	-15.4
16,936.0	90.28	357.63	12,732.8	4,131.7	-387.6	3.04	2.93	0.83	-7.0	-11.5
17,029.0	87.67	357.54	12,734.4	4,224.6	-391.5	2.81	-2.81	-0.10	-5.5	-8.2
17,085.0	93.08	358.05	12,734.1	4,280.6	-393.7	9.70	9.66	0.91	-5.9	-6.4
17,124.0	93.11	358.33	12,732.0	4,319.5	-394.9	0.72	0.08	0.72	-8.1	-5.4
17,217.0	93.36	358.78	12,726.7	4,412.3	-397.3	0.55	0.27	0.48	-13.5	-3.6
17,311.0	90.25	359.11	12,723.7	4,506.2	-399.0	3.33	-3.31	0.35	-16.6	-2.5
17,404.0	88.99	0.69	12,724.4	4,599.2	-399.2	2.17	-1.35	1.70	-16.1	-2.9
17,498.0	88.94	1.33	12,726.1	4,693.2	-397.5	0.68	-0.05	0.68	-14.5	-5.2
17,591.0	89.86	1.97	12,727.0	4,786.2	-394.8	1.21	0.99	0.69	-13.7	-8.5
17,685.0	88.32	0.23	12,728.5	4,880.1	-393.0	2.47	-1.64	-1.85	-12.3	-10.9
17,779.0	90.45	0.67	12,729.5	4,974.1	-392.3	2.31	2.27	0.47	-11.4	-12.2
17,900.0	90.50	0.61	12,728.5	5,095.1	-390.9	0.06	0.04	-0.05	-12.1	-14.3
17,993.0	90.11	357.54	12,728.0	5,188.1	-392.4	3.33	-0.42	-3.30	-12.3	-13.4
18,087.0	89.86	356.66	12,728.1	5,282.0	-397.2	0.97	-0.27	-0.94	-11.9	-9.3
18,181.0	90.31	357.09	12,727.9	5,375.8	-402.3	0.66	0.48	0.46	-11.6	-4.8
18,275.0	89.97	356.83	12,727.7	5,469.7	-407.3	0.46	-0.36	-0.28	-11.5	-0.4
18,369.0	89.16	358.38	12,728.4	5,563.6	-411.2	1.86	-0.86	1.65	-10.4	2.9
18,463.0	90.00	358.30	12,729.1	5,657.6	-414.0	0.90	0.89	-0.09	-9.3	5.1
18,556.0	91.74	358.49	12,727.7	5,750.5	-416.6	1.88	1.87	0.20	-10.3	7.1
18,650.0	90.73	358.44	12,725.7	5,844.4	-419.1	1.08	-1.07	-0.05	-12.0	9.0
18,744.0	88.60	359.57	12,726.2	5,938.4	-420.7	2.57	-2.27	1.20	-11.0	10.0
18,839.0	88.57	0.34	12,728.6	6,033.4	-420.8	0.81	-0.03	0.81	-8.3	9.5
18,932.0	90.11	1.18	12,729.6	6,126.4	-419.5	1.89	1.66	0.90	-6.9	7.7
19,026.0	90.22	1.24	12,729.4	6,220.4	-417.6	0.13	0.12	0.06	-6.8	5.1
19,120.0	90.11	1.32	12,729.1	6,314.3	-415.5	0.14	-0.12	0.09	-6.6	2.4



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3390.0usft (H&P 642)
Site:	Philly 31 Fed Com	MD Reference:	KB = 25' @ 3390.0usft (H&P 642)
Well:	#703H	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)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
19,214.0	89.52	0.63	12,729.4	6,408.3	-413.9	0.97	-0.63	-0.73	-6.0	0.2
19,308.0	89.27	0.89	12,730.4	6,502.3	-412.6	0.38	-0.27	0.28	-4.6	-1.7
19,402.0	90.48	1.04	12,730.6	6,596.3	-411.0	1.30	1.29	0.16	-4.0	-3.9
19,495.0	92.41	2.14	12,728.2	6,689.2	-408.5	2.39	2.08	1.18	-6.0	-7.1
19,588.0	90.59	0.76	12,725.8	6,782.1	-406.1	2.46	-1.96	-1.48	-8.0	-10.0
19,682.0	91.26	0.45	12,724.3	6,876.1	-405.1	0.79	0.71	-0.33	-9.2	-11.6
19,776.0	90.06	359.80	12,723.2	6,970.1	-404.9	1.45	-1.28	-0.69	-9.9	-12.4
19,869.0	89.94	359.44	12,723.2	7,063.1	-405.5	0.41	-0.13	-0.39	-9.2	-12.4
19,963.0	89.97	358.78	12,723.3	7,157.1	-407.0	0.70	0.03	-0.70	-8.5	-11.5
20,057.0	90.22	358.71	12,723.1	7,251.1	-409.0	0.28	0.27	-0.07	-7.9	-10.1
Last MWD Survey (MD = 20057.0)										
20,121.0	89.94	358.58	12,723.0	7,315.1	-410.6	0.48	-0.44	-0.20	-7.5	-9.0
20,190.0	89.94	358.58	12,723.1	7,384.0	-412.3	0.00	0.00	0.00	-6.9	-7.7
Projection to Bit (MD = 20190.0)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,510.9	12,450.5	-193.0	-398.1	FTP Crossing 12510.9' MD; 12450.5' TVD; -193.0'; -398.1'; 33.22
20,057.0	12,723.1	7,251.1	-409.0	Last MWD Survey (MD = 20057.0)
20,190.0	12,723.1	7,384.0	-412.3	Projection to Bit (MD = 20190.0)

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

Philly 31 Fed Com #703H

H&P 642

Plan #2

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: #703H

KB = 25' @ 3390.0usft (H&P 642) 3365.0
Northing 365096.00 Easting 796255.00 Latitude 32°0' 3.630 N Longitude 103°30' 59.564 W

To convert a Magnetic Direction to a Grid Direction, Add 6.45°
To convert a Magnetic Direction to a True Direction, Add 6.88° East
To convert a True Direction to a Grid Direction, Subtract 0.44°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.0	
2	5280.0	0.00	0.00	5280.0	0.0	0.00	0.00	0.00	0.0	
3	5887.9	12.16	236.78	5883.4	-35.2	-53.8	2.00	236.78	-32.1	
4	7485.1	12.16	236.78	7444.8	-219.5	-335.2	0.00	0.00	-200.2	
5	7890.4	0.00	0.00	7847.0	-243.0	-371.0	3.00	180.00	-221.6	Brushy Top (Philly 31 Fed Com #703H)
6	12296.4	0.00	0.00	12253.0	-243.0	-371.0	0.00	0.00	-221.6	
7	13044.9	89.82	359.63	12730.5	232.9	-374.1	12.00	359.63	253.8	
8	14142.5	89.82	359.63	12734.0	1330.5	-381.1	0.00	0.00	1350.0	TGT #1(Philly 31 Fed Com #703H)
9	14145.3	89.87	359.63	12734.0	1333.3	-381.1	2.00	-0.79	1352.8	
10	16365.3	89.87	359.63	12739.0	3553.3	-395.4	0.00	0.00	3570.0	TGT #2(Philly 31 Fed Com #703H)
11	16367.8	89.92	359.63	12739.0	3555.8	-395.4	2.00	1.78	3572.5	
12	17817.2	89.92	359.63	12741.0	5005.1	-404.7	0.00	0.00	5020.0	TGT #3(Philly 31 Fed Com #703H)
13	17832.7	90.23	359.63	12741.0	5020.7	-404.8	2.00	-0.09	5035.5	
14	19799.7	90.23	359.63	12733.0	6987.6	-417.4	0.00	0.00	7000.0	TGT #4(Philly 31 Fed Com #703H)
15	19809.6	90.43	359.63	12732.9	6997.5	-417.5	2.00	-0.08	7009.9	
16	20202.1	90.43	359.63	12730.0	7390.0	-420.0	0.00	0.00	7401.9	PBHL (Philly 31 Fed Com #703H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Eastng
Brushy Top (Philly 31 Fed Com #703H)	7847.0	-243.0	-371.0	364853.00	795884.00
FTP (Philly 31 Fed Com #703H)	12730.5	-181.0	-369.0	364962.00	795886.00
PBHL (Philly 31 Fed Com #703H)	12730.0	7380.0	-420.0	372658.00	795915.00
TGT #4(Philly 31 Fed Com #703H)	12733.0	6987.6	-417.4	372083.00	795937.58
TGT #1(Philly 31 Fed Com #703H)	12734.0	1330.5	-381.1	366426.50	795873.90
TGT #2(Philly 31 Fed Com #703H)	12739.0	3553.3	-395.4	368648.30	795933.60
TGT #3(Philly 31 Fed Com #703H)	12741.0	5005.1	-404.7	370101.10	795850.30

