EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Philly 31 Fed Com
#701H
OH

Design: OH

Midland PVA

20 July, 2018

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #701H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 25' @ 3391.0usft
Site:	Philly 31 Fed Com	**MD Reference:**	KB = 25' @ 3391.0usft
Well:	#701H	**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 #701H

Well Position	+N/-S	0.0 usft	**Northing:**	365,084.00 usft	**Latitude:**	32° 0' 3.819 N
	+E/-W	0.0 usft	**Easting:**	794,820.00 usft	**Longitude:**	103° 30' 56.229 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,366.0 usft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	9/19/2017	6.88	59.86	47,785.34813595

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	357.70

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Survey Program **Date** 7/20/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
184.0	943.0	Cartel 41 8' + 17' (OH)	MWD	OWSG MWD - Standard
1,068.0	20,141.0	Leam MWD (OH)	MWD	OWSG MWD - Standard

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
184.0	0.77	202.24	184.0	-1.1	-0.5	0.42	0.42	0.00	0.0	0.0
372.0	0.77	204.52	372.0	-3.5	-1.5	0.02	0.00	1.21	0.0	0.0
532.0	0.13	220.17	532.0	-4.6	-2.0	0.40	-0.40	9.78	0.0	0.0
689.0	0.11	252.77	689.0	-4.8	-2.3	0.04	-0.01	20.76	0.0	0.0
848.0	0.09	251.19	848.0	-4.8	-2.6	0.01	-0.01	-0.99	0.0	0.0
943.0	0.22	196.17	943.0	-5.0	-2.7	0.19	0.14	-57.92	0.0	0.0
1,068.0	0.10	63.10	1,068.0	-5.2	-2.6	0.24	-0.10	-106.45	-0.2	0.1
1,253.0	0.00	93.30	1,253.0	-5.2	-2.5	0.05	-0.05	0.00	-0.3	-0.3
1,438.0	0.20	216.20	1,438.0	-5.4	-2.7	0.11	0.11	0.00	0.1	0.1
1,625.0	0.20	160.30	1,625.0	-6.0	-2.8	0.10	0.00	-29.89	-0.5	-0.2
1,812.0	0.40	226.90	1,812.0	-6.7	-3.1	0.20	0.11	35.61	-1.1	0.7
2,000.0	0.50	174.40	2,000.0	-8.0	-3.5	0.22	0.05	-27.93	-2.5	-1.0
2,187.0	0.40	204.50	2,187.0	-9.4	-3.7	0.14	-0.05	16.10	-4.0	0.8
2,374.0	0.30	162.40	2,374.0	-10.5	-3.9	0.14	-0.05	-22.51	-4.5	-2.5
2,562.0	0.40	149.60	2,561.9	-11.5	-3.4	0.07	0.05	-6.81	-4.9	-3.6
2,749.0	0.30	111.71	2,748.9	-12.2	-2.6	0.13	-0.05	-20.26	-2.7	-6.3
2,935.0	0.60	98.70	2,934.9	-12.6	-1.2	0.17	0.16	-6.99	-2.7	-6.8
3,122.0	0.70	90.80	3,121.9	-12.7	0.9	0.07	0.05	-4.22	-3.8	-7.3
3,309.0	0.90	69.10	3,308.9	-12.2	3.4	0.19	0.11	-11.60	-3.4	-8.6
3,497.0	1.10	234.90	3,496.9	-12.7	3.4	1.06	0.11	88.19	0.8	9.5

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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)
3,685.0	1.10	237.50	3,684.9	-14.8	0.4	0.03	0.00	1.38	-2.4	9.5
3,872.0	0.70	176.90	3,871.8	-16.9	-1.1	0.52	-0.21	-32.41	-11.5	1.1
4,059.0	1.80	97.70	4,058.8	-18.4	1.9	0.97	0.59	-42.35	-6.4	-12.2
4,247.0	0.70	181.40	4,246.8	-19.9	4.8	0.99	-0.59	44.52	-14.3	7.9
4,434.0	0.70	142.80	4,433.8	-22.0	5.4	0.25	0.00	-20.64	-18.2	-3.5
4,621.0	1.00	105.60	4,620.7	-23.3	7.7	0.33	0.16	-19.89	-14.9	-14.4
4,807.0	1.40	254.40	4,806.7	-24.4	7.1	1.24	0.22	80.00	4.4	20.9
4,995.0	1.20	150.90	4,994.7	-26.7	5.8	1.09	-0.11	-55.05	-22.8	-2.8
5,186.0	1.30	129.00	5,185.6	-29.8	8.5	0.25	0.05	-11.47	-24.1	-11.9
5,266.0	0.90	136.20	5,265.6	-30.9	9.6	0.53	-0.50	9.00	-26.9	-7.9
5,453.0	2.70	268.50	5,452.6	-32.0	6.2	1.80	0.96	70.75	16.3	19.1
5,640.0	5.80	252.90	5,639.0	-34.9	-7.2	1.75	1.66	-8.34	16.3	11.1
5,827.0	8.30	246.60	5,824.6	-43.1	-28.6	1.40	1.34	-3.37	15.5	2.3
6,014.0	8.50	241.80	6,009.6	-55.0	-53.2	0.39	0.11	-2.57	12.0	-5.0
6,201.0	8.90	236.50	6,194.5	-69.5	-77.4	0.48	0.21	-2.83	8.8	-10.5
6,388.0	8.60	233.00	6,379.3	-85.9	-100.7	0.33	-0.16	-1.87	5.9	-14.5
6,574.0	9.30	220.60	6,563.0	-105.7	-121.6	1.10	0.38	-6.67	5.2	-14.2
6,760.0	9.10	217.70	6,746.6	-128.7	-140.3	0.27	-0.11	-1.56	1.0	-11.8
6,947.0	8.90	215.80	6,931.3	-152.1	-157.8	0.19	-0.11	-1.02	-3.0	-8.4
7,134.0	8.20	216.00	7,116.3	-174.7	-174.1	0.37	-0.37	0.11	-5.9	-4.6
7,321.0	7.70	215.30	7,301.5	-195.7	-189.2	0.27	-0.27	-0.37	-6.9	-0.9
7,508.0	6.90	214.80	7,487.0	-215.1	-202.9	0.43	-0.43	-0.27	-5.8	3.2
7,695.0	5.50	218.80	7,672.9	-231.3	-214.9	0.78	-0.75	2.14	-0.7	6.8
7,883.0	0.80	255.90	7,860.5	-238.7	-221.8	2.60	-2.50	19.73	10.2	2.1
8,071.0	0.90	275.60	8,048.5	-238.8	-224.6	0.16	0.05	10.48	11.0	-5.2
8,257.0	1.10	255.40	8,234.5	-239.2	-227.7	0.22	0.11	-10.86	9.0	-1.6
8,444.0	1.40	232.30	8,421.4	-241.0	-231.3	0.31	0.16	-12.35	4.9	1.3

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8,633.0	1.60	216.50	8,610.4	-244.5	-234.7	0.24	0.11	-8.36	-0.5	2.0
8,821.0	1.60	206.10	8,798.3	-249.0	-237.4	0.15	0.00	-5.53	-6.0	1.4
9,008.0	1.80	214.40	8,985.2	-253.8	-240.2	0.17	0.11	4.44	-11.3	2.6
9,194.0	1.70	216.90	9,171.1	-258.4	-243.5	0.07	-0.05	1.34	-16.8	3.2
9,382.0	1.70	221.80	9,359.0	-262.7	-247.0	0.08	0.00	2.61	-22.0	4.9
9,570.0	1.80	230.20	9,547.0	-266.7	-251.2	0.15	0.05	4.47	-26.8	8.5
9,757.0	0.30	209.80	9,733.9	-269.0	-253.7	0.81	-0.80	-10.91	-31.3	-2.4
9,944.0	0.20	352.90	9,920.9	-269.1	-254.0	0.25	-0.05	76.52	23.7	21.0
10,131.0	1.30	254.30	10,107.9	-269.3	-256.0	0.72	0.59	-52.73	-26.4	19.9
10,318.0	0.80	103.50	10,294.9	-270.2	-256.8	1.09	-0.27	-80.64	13.9	-31.3
10,505.0	0.50	266.40	10,481.9	-270.6	-256.4	0.69	-0.16	87.11	-22.0	26.2
10,692.0	1.80	98.20	10,668.9	-271.0	-254.3	1.23	0.70	-89.95	14.1	-30.3
10,880.0	1.20	133.50	10,856.8	-272.8	-249.9	0.57	-0.32	18.78	-10.4	-31.2
10,973.0	1.70	13.00	10,949.8	-272.1	-248.9	2.72	0.54	-129.57	31.3	6.0
11,067.0	1.20	345.40	11,043.8	-269.8	-248.8	0.90	-0.53	-29.36	22.7	19.2
11,160.0	2.20	20.20	11,136.7	-267.2	-248.5	1.50	1.08	37.42	27.0	3.3
11,346.0	2.10	27.70	11,322.6	-260.8	-245.6	0.16	-0.05	4.03	20.3	0.3
11,533.0	1.30	269.10	11,509.5	-257.8	-246.2	1.58	-0.43	-63.42	-10.4	14.7
11,720.0	1.10	291.00	11,696.5	-257.2	-250.0	0.27	-0.11	11.71	-7.9	18.3
11,814.0	1.30	257.10	11,790.5	-257.1	-251.9	0.77	0.21	-36.06	-18.6	10.2
11,921.0	1.10	247.40	11,897.5	-257.8	-254.0	0.27	-0.19	-9.07	-22.3	6.8
12,108.0	2.00	47.10	12,084.4	-256.3	-253.3	1.63	0.48	85.40	21.7	2.0
12,155.0	2.40	56.90	12,131.4	-255.2	-251.8	1.17	0.85	20.85	19.9	-1.6
12,202.0	1.80	53.60	12,178.4	-254.2	-250.4	1.30	-1.28	-7.02	18.2	-0.5
12,205.0	2.05	45.54	12,181.4	-254.1	-250.3	12.16	8.19	-268.59	18.0	2.1
KOP 12205.0' MD; 12181.4' TVD; -254.1'; -250.3'; 2.05										
12,295.0	12.50	8.20	12,270.5	-243.3	-247.8	12.16	11.62	-41.49	5.8	11.1

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12,342.0	19.70	2.20	12,315.7	-230.4	-246.8	15.70	15.32	-12.77	-0.3	10.7
12,388.0	26.00	5.00	12,358.0	-212.6	-245.6	13.89	13.70	6.09	-5.7	9.9
12,437.0	30.25	5.75	12,401.2	-189.6	-243.4	8.70	8.67	1.53	-11.5	8.2
12,481.0	34.80	5.90	12,438.3	-166.0	-241.0	10.34	10.34	0.34	-15.8	6.0
12,528.0	38.30	5.40	12,476.1	-138.2	-238.3	7.47	7.45	-1.06	-19.2	3.1
12,575.0	44.90	8.40	12,511.2	-107.2	-234.5	14.66	14.04	6.38	-21.9	0.0
12,622.0	51.20	9.60	12,542.6	-72.7	-229.0	13.54	13.40	2.55	-25.2	-5.3
12,668.0	55.70	7.90	12,570.0	-36.2	-223.4	10.22	9.78	-3.70	-27.9	-11.7
12,715.0	59.40	3.50	12,595.2	3.2	-219.5	11.15	7.87	-9.36	-28.5	-17.3
12,753.8	61.12	0.10	12,614.5	36.9	-218.4	8.81	4.45	-8.75	-27.1	-19.5
FTP Crossing 12753.8' MD; 12614.5' TVD; 36.9'; -218.4'; 61.12										
12,762.0	61.50	359.40	12,618.4	44.1	-218.4	8.81	4.58	-8.57	-26.5	-19.7
12,809.0	64.80	357.10	12,639.6	86.0	-219.7	8.27	7.02	-4.89	-22.2	-19.1
12,856.0	67.80	357.80	12,658.5	129.0	-221.6	6.53	6.38	1.49	-16.1	-17.3
12,903.0	73.60	358.70	12,674.1	173.3	-223.0	12.47	12.34	1.91	-8.9	-16.1
12,948.0	77.60	358.50	12,685.2	216.9	-224.1	8.90	8.89	-0.44	-1.5	-15.3
13,042.0	86.70	359.40	12,698.1	309.9	-225.8	9.73	9.68	0.96	10.5	-14.3
13,135.0	89.80	359.10	12,700.9	402.8	-227.0	3.35	3.33	-0.32	12.9	-13.8
13,242.0	90.00	359.80	12,701.1	509.8	-228.0	0.68	0.19	0.65	12.5	-13.5
13,335.0	88.50	359.60	12,702.3	602.8	-228.5	1.63	-1.61	-0.22	13.3	-13.7
13,429.0	89.20	0.10	12,704.2	696.8	-228.7	0.92	0.74	0.53	14.7	-14.2
13,523.0	89.60	0.50	12,705.2	790.8	-228.2	0.60	0.43	0.43	15.2	-15.3
13,617.0	90.60	2.10	12,705.0	884.7	-226.1	2.01	1.06	1.70	14.6	-18.2
13,711.0	91.00	3.30	12,703.7	978.6	-221.7	1.35	0.43	1.28	12.8	-23.3
13,804.0	90.20	1.00	12,702.7	1,071.5	-218.2	2.62	-0.86	-2.47	11.3	-27.4
13,898.0	88.30	354.70	12,704.0	1,165.4	-221.7	7.00	-2.02	-6.70	12.0	-24.6
13,991.0	88.70	354.30	12,706.4	1,257.9	-230.6	0.61	0.43	-0.43	13.9	-16.3

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14,085.0	88.90	357.30	12,708.4	1,351.7	-237.5	3.20	0.21	3.19	15.2	-10.2
14,179.0	90.60	359.60	12,708.8	1,445.6	-240.1	3.04	1.81	2.45	15.1	-8.3
14,273.0	92.00	1.40	12,706.6	1,539.6	-239.2	2.43	1.49	1.91	12.5	-9.8
14,367.0	89.30	359.90	12,705.6	1,633.6	-238.2	3.29	-2.87	-1.60	11.2	-11.6
14,460.0	89.30	358.50	12,706.7	1,726.5	-239.5	1.51	0.00	-1.51	12.1	-11.0
14,554.0	90.00	353.30	12,707.3	1,820.3	-246.2	5.58	0.74	-5.53	12.4	-4.9
14,648.0	90.20	353.60	12,707.1	1,913.7	-256.9	0.38	0.21	0.32	12.0	5.1
14,741.0	91.10	358.40	12,706.1	2,006.4	-263.4	5.25	0.97	5.16	10.7	10.9
14,836.0	92.30	1.00	12,703.3	2,101.3	-263.9	3.01	1.26	2.74	7.6	10.7
15,022.0	87.80	1.90	12,703.1	2,287.2	-259.2	2.47	-2.42	0.48	7.0	4.6
15,115.0	90.00	3.80	12,704.9	2,380.1	-254.6	3.13	2.37	2.04	8.5	-0.7
15,209.0	87.20	5.90	12,707.2	2,473.7	-246.6	3.72	-2.98	2.23	10.5	-9.3
15,303.0	85.90	2.80	12,712.8	2,567.3	-239.5	3.57	-1.38	-3.30	15.9	-17.1
15,491.0	92.70	1.00	12,715.1	2,755.0	-233.3	3.74	3.62	-0.96	17.8	-24.7
15,585.0	91.60	0.80	12,711.6	2,848.9	-231.8	1.19	-1.17	-0.21	14.0	-26.9
15,678.0	88.60	357.00	12,711.4	2,941.9	-233.6	5.21	-3.23	-4.09	13.6	-25.8
15,772.0	88.80	356.30	12,713.6	3,035.7	-239.1	0.77	0.21	-0.74	15.5	-20.9
15,865.0	90.70	356.10	12,714.0	3,128.5	-245.2	2.05	2.04	-0.22	15.8	-15.5
15,959.0	91.90	359.20	12,711.8	3,222.4	-249.1	3.54	1.28	3.30	13.6	-12.3
16,052.0	90.10	359.90	12,710.2	3,315.4	-249.8	2.08	-1.94	0.75	11.8	-12.3
16,146.0	89.60	359.90	12,710.5	3,409.4	-250.0	0.53	-0.53	0.00	12.0	-12.8
16,240.0	89.90	0.30	12,710.9	3,503.4	-249.8	0.53	0.32	0.43	12.3	-13.6
16,333.0	90.60	1.90	12,710.5	3,596.3	-248.0	1.88	0.75	1.72	11.8	-16.1
16,427.0	90.30	1.20	12,709.7	3,690.3	-245.5	0.81	-0.32	-0.74	10.9	-19.3
16,520.0	89.30	359.80	12,710.1	3,783.3	-244.7	1.85	-1.08	-1.51	11.1	-20.8
16,614.0	89.60	1.00	12,711.0	3,877.3	-244.0	1.32	0.32	1.28	11.9	-22.2
16,708.0	88.50	358.90	12,712.5	3,971.3	-244.1	2.52	-1.17	-2.23	13.4	-22.8

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #701H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 25' @ 3391.0usft
Site:	Philly 31 Fed Com	**MD Reference:**	KB = 25' @ 3391.0usft
Well:	#701H	**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)
16,802.0	89.20	359.20	12,714.4	4,065.2	-245.7	0.81	0.74	0.32	15.1	-21.9
16,895.0	89.30	359.90	12,715.6	4,158.2	-246.4	0.76	0.11	0.75	16.2	-21.9
16,989.0	89.40	358.90	12,716.7	4,252.2	-247.4	1.07	0.11	-1.06	17.2	-21.6
17,084.0	92.10	0.50	12,715.4	4,347.2	-247.9	3.30	2.84	1.68	15.9	-21.8
17,177.0	91.40	358.70	12,712.6	4,440.1	-248.5	2.08	-0.75	-1.94	12.9	-21.8
17,271.0	90.40	359.20	12,711.1	4,534.1	-250.2	1.19	-1.06	0.53	11.3	-20.8
17,365.0	91.00	0.10	12,710.0	4,628.1	-250.8	1.15	0.64	0.96	10.1	-20.9
17,458.0	89.50	0.50	12,709.6	4,721.1	-250.3	1.67	-1.61	0.43	9.6	-22.1
17,552.0	89.30	359.40	12,710.6	4,815.1	-250.4	1.19	-0.21	-1.17	10.6	-22.7
17,646.0	90.00	358.70	12,711.1	4,909.1	-252.0	1.05	0.74	-0.74	11.1	-21.8
17,740.0	90.20	0.30	12,711.0	5,003.1	-252.8	1.72	0.21	1.70	11.0	-21.7
17,834.0	90.00	359.60	12,710.8	5,097.1	-252.9	0.77	-0.21	-0.74	10.8	-22.3
17,926.0	90.90	359.40	12,710.1	5,189.1	-253.7	1.00	0.98	-0.22	10.1	-22.1
18,051.0	88.00	356.60	12,711.3	5,313.9	-258.0	3.22	-2.32	-2.24	11.3	-18.7
18,145.0	88.60	357.00	12,714.1	5,407.8	-263.3	0.77	0.64	0.43	14.1	-14.1
18,238.0	89.80	358.00	12,715.4	5,500.7	-267.3	1.68	1.29	1.08	15.9	-10.8
18,331.0	90.20	358.50	12,715.4	5,593.6	-270.2	0.69	0.43	0.54	16.4	-8.6
18,426.0	91.10	358.70	12,714.3	5,688.6	-272.5	0.97	0.95	0.21	15.8	-7.0
18,520.0	90.60	359.10	12,712.9	5,782.5	-274.3	0.68	-0.53	0.43	14.9	-5.9
18,613.0	90.50	359.20	12,712.0	5,875.5	-275.7	0.15	-0.11	0.11	14.6	-5.2
18,706.0	87.70	357.50	12,713.5	5,968.5	-278.4	3.52	-3.01	-1.83	16.5	-3.2
18,800.0	89.00	358.40	12,716.2	6,062.4	-281.7	1.68	1.38	0.96	19.7	-0.5
18,894.0	89.60	358.50	12,717.3	6,156.3	-284.3	0.65	0.64	0.11	21.4	1.3
18,987.0	90.30	358.50	12,717.4	6,249.3	-286.7	0.75	0.75	0.00	22.0	3.1
19,081.0	90.70	358.70	12,716.6	6,343.3	-289.0	0.48	0.43	0.21	21.7	4.7
19,174.0	90.20	0.10	12,715.8	6,436.3	-290.0	1.60	-0.54	1.51	21.4	5.0
19,267.0	90.00	359.40	12,715.7	6,529.3	-290.4	0.78	-0.22	-0.75	21.8	4.7

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #701H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 25' @ 3391.0usft
Site:	Philly 31 Fed Com	**MD Reference:**	KB = 25' @ 3391.0usft
Well:	#701H	**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)
19,361.0	91.40	359.80	12,714.5	6,623.2	-291.0	1.55	1.49	0.43	21.1	4.7
19,455.0	89.80	1.00	12,713.6	6,717.2	-290.4	2.13	-1.70	1.28	20.6	3.4
19,547.0	90.00	0.80	12,713.7	6,809.2	-288.9	0.31	0.22	-0.22	21.3	1.2
19,641.0	88.50	1.90	12,714.9	6,903.2	-286.7	1.98	-1.60	1.17	23.0	-1.7
19,734.0	89.20	2.10	12,716.8	6,996.1	-283.5	0.78	0.75	0.22	25.4	-5.6
19,827.0	89.30	2.10	12,718.0	7,089.0	-280.1	0.11	0.11	0.00	27.1	-9.7
19,920.0	90.30	2.40	12,718.4	7,182.0	-276.4	1.12	1.08	0.32	27.9	-14.0
20,082.0	90.30	2.40	12,717.5	7,343.8	-269.6	0.00	0.00	0.00	28.0	-22.0
Last MWD Survey (MD = 20082.0)										
20,127.0	90.30	2.40	12,717.3	7,388.8	-267.7	0.00	0.00	0.00	28.0	-24.2
LTP Crossing 20127.0' MD; 12717.3' TVD; 7388.8'; -267.7'; 90.30										
20,141.0	90.30	2.40	12,717.2	7,402.8	-267.2	0.00	0.00	0.00	30.1	-26.0
Projection to Bit (MD = 20141.0)										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
12,205.0	12,181.4	-254.1	-250.3	KOP 12205.0' MD; 12181.4' TVD; -254.1'; -250.3'; 2.05
12,753.8	12,614.5	36.9	-218.4	FTP Crossing 12753.8' MD; 12614.5' TVD; 36.9'; -218.4'; 61.12
20,082.0	12,717.5	7,343.8	-269.6	Last MWD Survey (MD = 20082.0)
20,127.0	12,717.3	7,388.8	-267.7	LTP Crossing 20127.0' MD; 12717.3' TVD; 7388.8'; -267.7'; 90.30
20,141.0	12,717.2	7,402.8	-267.2	Projection to Bit (MD = 20141.0)

Checked By: _____ Approved By: _____ Date: _____

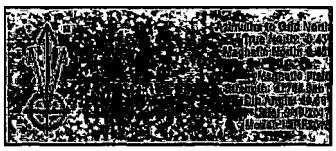
eog resources

Lea County, NM (NAD 83 NME)

Philly 31 Fed Com #701H

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



To convert a Magnetic Direction to a Grid Direction, Add 6.45°
To convert a Magnetic Direction to a True Direction, Add 6.68° East
To convert a True Direction to a Grid Direction, Subtract 0.43°

WELL DETAILS: #701H

3366.0
KB = 25' @ 3391.0usft

Northing	Easting	Latitude	Longitude
365084.00	794820.00	32° 0' 3.819 N	103° 30' 56.229 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	943.0	0.22	196.17	943.0	-5.0	-2.7	0.00	0.00	-4.9	
2	1043.0	0.22	196.17	1043.0	-5.4	-2.8	0.00	0.00	-5.3	
3	1054.0	0.00	0.00	1054.0	-5.4	-2.8	2.00	180.00	-5.3	
4	5200.0	0.00	0.00	5200.0	-5.4	-2.8	0.00	0.00	-5.3	
5	5587.2	7.74	224.47	5586.0	-24.1	-21.1	2.00	224.47	-23.2	
6	7670.2	7.74	224.47	7650.0	-224.4	-217.7	0.00	0.00	-215.6	
7	8057.4	0.00	0.00	8036.0	-243.0	-236.0	2.00	180.00	-233.5	Brushy Top (Philly 31 Fed Com #701H)
8	12231.1	0.00	0.00	12209.7	-243.0	-236.0	0.00	0.00	-233.5	
9	12978.7	89.71	359.58	12687.2	232.0	-239.5	12.00	359.58	241.3	
10	13737.7	89.71	359.58	12691.0	991.0	-245.0	0.00	0.00	999.9	TGT #1(Philly 31 Fed Com #701H)
11	13740.3	89.66	359.58	12691.0	993.7	-245.1	2.00	-180.00	1002.6	
12	14237.9	89.66	359.58	12694.0	1491.2	-248.7	0.00	0.00	1499.9	TGT #2(Philly 31 Fed Com #701H)
13	14247.5	89.85	359.58	12694.0	1500.8	-248.8	2.00	0.00	1509.4	
14	15738.7	89.85	359.58	12698.0	2992.0	-259.7	0.00	0.00	2999.9	TGT #3(Philly 31 Fed Com #701H)
15	15743.0	89.93	359.58	12698.0	2996.2	-259.7	2.00	0.00	3004.2	
16	17439.7	89.93	359.58	12700.0	4692.9	-272.2	0.00	0.00	4700.0	TGT #4(Philly 31 Fed Com #701H)
17	17443.0	90.00	359.58	12700.0	4696.3	-272.2	2.00	0.00	4703.4	
18	18140.0	90.00	359.58	12700.0	5393.2	-277.3	0.00	0.00	5399.9	TGT #5(Philly 31 Fed Com #701H)
19	18155.4	90.31	359.58	12700.0	5408.6	-277.4	2.00	0.00	5415.3	
20	20005.9	90.31	359.58	12690.0	7259.0	-291.0	0.00	0.00	7264.8	PBHL (Philly 31 Fed Com #701H)
21	20135.9	90.31	359.58	12689.3	7389.0	-292.0	0.00	0.00	7394.8	

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
Brushy Top (Philly 31 Fed Com #701H)	8036.0	-243.0	-236.0	364841.00	794584.00
FTP (Philly 31 Fed Com #701H)	12686.0	37.0	-236.0	365121.00	794584.00
PBHL (Philly 31 Fed Com #701H)	12690.0	7259.0	-291.0	372343.00	794529.00
TGT #1(Philly 31 Fed Com #701H)	12691.0	991.0	-245.0	366076.00	794574.95
TGT #2(Philly 31 Fed Com #701H)	12694.0	1491.2	-248.7	366576.20	794571.29
TGT #3(Philly 31 Fed Com #701H)	12698.0	2992.0	-259.7	368076.00	794560.28
TGT #4(Philly 31 Fed Com #701H)	12700.0	4692.9	-272.2	369776.90	794547.81
TGT #5(Philly 31 Fed Com #701H)	12700.0	5393.2	-277.3	370477.20	794542.68