EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Convoy 28 State Com
#702H
73794
OH

Design: OH

Standard Survey Report

05 April, 2018

Survey Report

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #702H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 25 @ 3546.0usft (HP 465)
Site:	Convoy 28 State Com	**MD Reference:**	KB = 25 @ 3546.0usft (HP 465)
Well:	#702H	**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	Convoy 28 State Com				
Site Position:		**Northing:**	435,221.00 usft	**Latitude:**	32° 11' 39.126 N
From:	Map	**Easting:**	777,172.00 usft	**Longitude:**	103° 34' 15.406 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.41 °

Well	#702H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	435,254.00 usft	**Latitude:**	32° 11' 39.453 N
	+E/-W	0.0 usft	**Easting:**	777,172.00 usft	**Longitude:**	103° 34' 15.403 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,521.0 usft

Wellbore	OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	11/30/2017	6.90	60.03	47,873.08399428

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	179.93

Survey Program **Date** 4/5/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
142.0	1,292.0	Olebrook MWD (OH)	MWD	OWSG MWD - Standard
1,300.0	22,416.0	Intrepid MWD (OH)	MWD	OWSG MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
142.0	0.62	73.86	142.0	0.2	0.7	-0.2	0.44	0.44	0.00
234.0	1.32	292.88	234.0	0.8	0.2	-0.8	2.00	0.76	-153.24
295.0	0.44	15.23	295.0	1.3	-0.3	-1.3	2.19	-1.44	135.00
390.0	0.79	309.58	390.0	2.0	-0.8	-2.0	0.77	0.37	-69.11
485.0	0.18	169.22	485.0	2.3	-1.2	-2.3	0.98	-0.64	-147.75
579.0	1.06	271.79	579.0	2.2	-2.1	-2.2	1.18	0.94	109.12
643.0	0.44	209.74	643.0	2.0	-2.8	-2.0	1.47	-0.97	-96.95
706.0	1.06	248.85	706.0	1.6	-3.5	-1.6	1.22	0.98	62.08
770.0	0.88	241.57	770.0	1.1	-4.4	-1.1	0.34	-0.28	-11.38

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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
801.0	0.97	225.64	800.9	0.8	-4.8	-0.8	0.88	0.29	-51.39
864.0	1.06	228.94	863.9	0.1	-5.7	-0.1	0.17	0.14	5.24
927.0	1.23	203.41	926.9	-0.9	-6.4	0.9	0.85	0.27	-40.52
1,022.0	0.62	227.67	1,021.9	-2.2	-7.1	2.2	0.75	-0.64	25.54
1,054.0	1.32	197.61	1,053.9	-2.7	-7.4	2.7	2.63	2.19	-93.94
1,148.0	0.97	270.21	1,147.9	-3.7	-8.5	3.7	1.47	-0.37	77.23
1,211.0	0.26	297.72	1,210.9	-3.6	-9.2	3.6	1.19	-1.13	43.67
1,274.0	0.62	320.04	1,273.9	-3.3	-9.5	3.3	0.62	0.57	35.43
1,292.0	0.35	292.00	1,291.9	-3.2	-9.6	3.2	1.96	-1.50	-155.78
1,448.0	3.10	348.90	1,447.8	1.1	-10.9	-1.1	1.87	1.76	36.47
1,541.0	4.60	356.90	1,540.6	7.3	-11.6	-7.3	1.71	1.61	8.60
1,730.0	4.00	357.20	1,729.1	21.4	-12.3	-21.5	0.32	-0.32	0.16
1,919.0	4.80	11.90	1,917.5	35.8	-11.0	-35.8	0.73	0.42	7.78
2,108.0	4.30	11.00	2,105.9	50.5	-8.0	-50.5	0.27	-0.26	-0.48
2,297.0	4.40	6.20	2,294.4	64.6	-5.9	-64.6	0.20	0.05	-2.54
2,487.0	5.10	1.60	2,483.7	80.3	-4.8	-80.3	0.42	0.37	-2.42
2,676.0	5.50	2.80	2,671.9	97.8	-4.2	-97.8	0.22	0.21	0.63
2,865.0	4.50	4.60	2,860.2	114.2	-3.1	-114.2	0.54	-0.53	0.95
3,055.0	3.30	5.00	3,049.7	127.1	-2.1	-127.1	0.63	-0.63	0.21
3,245.0	4.90	359.40	3,239.3	140.6	-1.7	-140.6	0.87	0.84	-2.95
3,434.0	4.00	5.00	3,427.7	155.3	-1.2	-155.3	0.53	-0.48	2.96
3,624.0	3.60	8.50	3,617.3	167.8	0.3	-167.8	0.24	-0.21	1.84
3,813.0	3.60	356.20	3,805.9	179.6	0.8	-179.6	0.41	0.00	-6.51
4,002.0	4.60	357.10	3,994.4	193.1	0.0	-193.0	0.53	0.53	0.48
4,191.0	4.80	353.90	4,182.8	208.5	-1.2	-208.5	0.17	0.11	-1.69
4,380.0	5.00	19.50	4,371.1	224.1	0.7	-224.1	1.15	0.11	13.54
4,570.0	5.10	23.60	4,560.4	239.7	6.8	-239.6	0.20	0.05	2.16
4,759.0	4.50	34.90	4,748.7	253.4	14.4	-253.4	0.59	-0.32	5.98
4,948.0	4.00	21.10	4,937.2	265.7	21.0	-265.6	0.60	-0.26	-7.30
5,053.0	3.70	24.30	5,042.0	272.2	23.8	-272.1	0.35	-0.29	3.05
5,135.0	3.50	22.60	5,123.8	276.9	25.8	-276.9	0.28	-0.24	-2.07
5,324.0	7.30	341.90	5,312.0	293.6	24.3	-293.6	2.74	2.01	-21.53
5,513.0	10.20	337.50	5,498.8	320.5	14.1	-320.5	1.57	1.53	-2.33
5,702.0	10.20	336.10	5,684.8	351.3	1.0	-351.3	0.13	0.00	-0.74
5,891.0	11.30	338.20	5,870.5	383.8	-12.7	-383.8	0.62	0.58	1.11
6,081.0	11.70	337.90	6,056.6	418.9	-26.9	-418.9	0.21	0.21	-0.16
6,140.7	11.16	336.94	6,115.1	429.8	-31.4	-429.9	0.96	-0.91	-1.61
AC TGT(Con 28 ST Com #702H)									
6,270.0	10.00	334.50	6,242.3	451.5	-41.1	-451.5	0.96	-0.90	-1.88
6,460.0	6.30	334.40	6,430.3	475.8	-52.7	-475.8	1.95	-1.95	-0.05
6,649.0	3.00	306.90	6,618.7	488.1	-61.2	-488.2	2.06	-1.75	-14.55
6,838.0	2.50	273.60	6,807.5	491.3	-69.2	-491.4	0.87	-0.26	-17.62
7,027.0	3.60	330.30	6,996.2	496.7	-76.3	-496.8	1.62	0.58	30.00

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Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,215.0	2.90	350.00	7,183.9	506.6	-80.1	-506.7	0.70	-0.37	10.48
7,404.0	3.70	15.50	7,372.6	517.1	-79.3	-517.2	0.87	0.42	13.49
7,592.0	3.60	4.50	7,560.3	528.9	-77.2	-529.0	0.38	-0.05	-5.85
7,781.0	1.70	309.30	7,749.1	536.6	-78.9	-536.7	1.58	-1.01	-29.21
7,971.0	1.50	252.70	7,939.0	537.6	-83.4	-537.7	0.80	-0.11	-29.79
8,160.0	1.90	253.80	8,127.9	536.0	-88.8	-536.1	0.21	0.21	0.58
8,349.0	2.10	253.00	8,316.8	534.1	-95.1	-534.2	0.11	0.11	-0.42
8,538.0	1.60	168.70	8,505.7	530.5	-97.9	-530.6	1.33	-0.26	-44.60
8,727.0	1.60	165.50	8,694.7	525.4	-96.7	-525.5	0.05	0.00	-1.69
8,917.0	1.30	163.00	8,884.6	520.7	-95.4	-520.9	0.16	-0.16	-1.32
9,106.0	1.10	164.30	9,073.6	516.9	-94.3	-517.1	0.11	-0.11	0.69
9,294.0	0.80	154.10	9,261.5	514.0	-93.3	-514.1	0.18	-0.16	-5.43
9,484.0	1.10	175.70	9,451.5	511.0	-92.5	-511.1	0.24	0.16	11.37
9,671.0	2.10	196.00	9,638.4	505.9	-93.4	-506.0	0.61	0.53	10.86
9,861.0	2.90	186.70	9,828.3	497.8	-94.9	-497.9	0.47	0.42	-4.89
10,050.0	1.50	222.30	10,017.1	491.2	-97.1	-491.4	1.00	-0.74	18.84
10,238.0	1.60	217.90	10,205.1	487.3	-100.4	-487.5	0.08	0.05	-2.34
10,426.0	0.40	255.50	10,393.0	485.1	-102.6	-485.2	0.69	-0.64	20.00
10,614.0	0.60	36.40	10,581.0	485.7	-102.7	-485.9	0.50	0.11	74.95
10,802.0	1.00	202.90	10,769.0	485.0	-102.7	-485.1	0.85	0.21	88.56
10,991.0	0.40	285.40	10,958.0	483.7	-104.0	-483.8	0.54	-0.32	43.65
11,179.0	0.90	249.40	11,146.0	483.3	-106.0	-483.5	0.33	0.27	-19.15
11,367.0	1.30	38.70	11,334.0	484.5	-106.1	-484.6	1.13	0.21	79.41
11,553.0	1.20	169.90	11,520.0	484.2	-104.4	-484.3	1.22	-0.05	70.54
11,741.0	2.00	163.80	11,707.9	479.1	-103.1	-479.2	0.43	0.43	-3.24
11,779.0	2.00	172.10	11,745.9	477.8	-102.9	-477.9	0.76	0.00	21.84
11,862.0	2.20	194.40	11,828.8	474.8	-103.1	-475.0	1.01	0.24	26.87
11,928.4	8.57	172.54	11,894.8	468.7	-102.7	-468.8	9.92	9.61	-32.94
KOP(Con 28 ST Com #702H)									
11,956.0	11.30	170.80	11,922.1	464.0	-102.0	-464.1	9.92	9.86	-6.31
12,003.0	21.60	169.20	11,967.1	450.9	-99.7	-451.0	21.93	21.91	-3.40
12,051.0	30.10	170.80	12,010.2	430.3	-96.1	-430.4	17.77	17.71	3.33
12,098.0	32.40	170.20	12,050.4	406.3	-92.1	-406.4	4.94	4.89	-1.28
12,145.0	36.00	169.90	12,089.3	380.2	-87.5	-380.4	7.67	7.66	-0.64
12,192.0	38.20	168.70	12,126.8	352.4	-82.2	-352.5	4.93	4.68	-2.55
12,238.0	40.80	170.10	12,162.3	323.6	-76.8	-323.7	5.97	5.65	3.04
12,285.0	44.60	172.80	12,196.8	292.1	-72.1	-292.2	8.97	8.09	5.74
12,332.0	47.60	176.50	12,229.4	258.4	-69.0	-258.5	8.54	6.38	7.87
12,379.0	47.80	178.00	12,261.0	223.7	-67.3	-223.8	2.40	0.43	3.19
12,427.0	47.40	178.40	12,293.4	188.3	-66.2	-188.3	1.04	-0.83	0.83
12,474.0	49.90	178.20	12,324.4	153.0	-65.2	-153.1	5.33	5.32	-0.43
12,506.9	54.80	179.13	12,344.5	126.9	-64.6	-127.0	15.06	14.89	2.84
FTP(Con 28 ST Com #702H)									
12,521.0	56.90	179.50	12,352.4	115.3	-64.4	-115.4	15.06	14.90	2.59

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12,568.0	62.20	178.90	12,376.2	74.8	-63.9	-74.9	11.33	11.28	-1.28
12,615.0	63.30	177.80	12,397.8	33.0	-62.7	-33.1	3.13	2.34	-2.34
12,662.0	67.10	176.70	12,417.5	-9.6	-60.6	9.5	8.36	8.09	-2.34
12,710.0	73.70	178.90	12,433.6	-54.7	-58.9	54.7	14.41	13.75	4.58
12,757.0	76.50	180.10	12,445.7	-100.1	-58.5	100.1	6.45	5.96	2.55
12,804.0	77.80	180.60	12,456.1	-146.0	-58.8	145.9	2.95	2.77	1.06
12,851.0	87.80	180.10	12,462.0	-192.5	-59.1	192.5	21.30	21.28	-1.06
12,899.0	95.20	179.10	12,460.7	-240.5	-58.7	240.4	15.56	15.42	-2.08
12,946.0	90.90	179.20	12,458.2	-287.4	-58.0	287.3	9.15	-9.15	0.21
12,993.0	86.80	179.60	12,459.2	-334.4	-57.5	334.3	8.76	-8.72	0.85
13,038.0	87.10	179.70	12,461.6	-379.3	-57.3	379.2	0.70	0.67	0.22
13,117.0	87.30	180.90	12,465.4	-458.2	-57.7	458.1	1.54	0.25	1.52
13,211.0	87.20	180.10	12,469.9	-552.1	-58.5	552.0	0.86	-0.11	-0.85
13,305.0	88.10	179.00	12,473.8	-646.0	-57.8	645.9	1.51	0.96	-1.17
13,369.0	88.00	178.50	12,476.0	-710.0	-56.4	709.9	0.80	-0.16	-0.78
13,400.0	87.90	178.50	12,477.1	-740.9	-55.6	740.9	0.32	-0.32	0.00
13,495.0	90.20	178.60	12,478.7	-835.9	-53.2	835.8	2.42	2.42	0.11
13,589.0	90.30	177.80	12,478.3	-929.8	-50.2	929.8	0.86	0.11	-0.85
13,684.0	91.20	178.80	12,477.0	-1,024.8	-47.4	1,024.7	1.42	0.95	1.05
13,779.0	90.70	179.00	12,475.4	-1,119.8	-45.6	1,119.7	0.57	-0.53	0.21
13,874.0	90.30	177.90	12,474.6	-1,214.7	-43.0	1,214.7	1.23	-0.42	-1.16
13,968.0	90.50	177.40	12,473.9	-1,308.6	-39.1	1,308.6	0.57	0.21	-0.53
14,063.0	91.30	178.10	12,472.5	-1,403.5	-35.4	1,403.5	1.12	0.84	0.74
14,158.0	90.60	180.20	12,470.9	-1,498.5	-34.0	1,498.5	2.33	-0.74	2.21
14,253.0	90.30	180.80	12,470.1	-1,593.5	-34.8	1,593.5	0.71	-0.32	0.63
14,347.0	89.90	180.10	12,470.0	-1,687.5	-35.6	1,687.5	0.86	-0.43	-0.74
14,442.0	89.80	180.80	12,470.2	-1,782.5	-36.3	1,782.5	0.74	-0.11	0.74
14,537.0	89.10	181.70	12,471.1	-1,877.5	-38.4	1,877.4	1.20	-0.74	0.95
14,631.0	89.30	181.30	12,472.4	-1,971.4	-40.8	1,971.4	0.48	0.21	-0.43
14,725.0	89.70	181.50	12,473.3	-2,065.4	-43.1	2,065.3	0.48	0.43	0.21
14,819.0	88.40	181.10	12,474.8	-2,159.4	-45.3	2,159.3	1.45	-1.38	-0.43
14,913.0	90.90	179.70	12,475.4	-2,253.3	-45.9	2,253.3	3.05	2.66	-1.49
14,959.7	90.36	179.70	12,474.9	-2,300.0	-45.7	2,299.9	1.16	-1.16	0.00
TGT 1(Con 28 ST Com #702H)									
15,008.0	89.80	179.70	12,474.8	-2,348.3	-45.4	2,348.3	1.16	-1.16	0.00
15,102.0	90.40	179.50	12,474.7	-2,442.3	-44.8	2,442.3	0.67	0.64	-0.21
15,197.0	89.80	179.40	12,474.5	-2,537.3	-43.9	2,537.3	0.64	-0.63	-0.11
15,291.0	90.20	179.30	12,474.5	-2,631.3	-42.8	2,631.3	0.44	0.43	-0.11
15,385.0	90.40	179.30	12,474.0	-2,725.3	-41.6	2,725.3	0.21	0.21	0.00
15,479.0	91.10	179.30	12,472.8	-2,819.3	-40.5	2,819.2	0.74	0.74	0.00
15,573.0	90.90	179.40	12,471.1	-2,913.3	-39.4	2,913.2	0.24	-0.21	0.11
15,668.0	89.10	177.90	12,471.1	-3,008.2	-37.2	3,008.2	2.47	-1.89	-1.58
15,731.0	89.00	178.30	12,472.2	-3,071.2	-35.1	3,071.2	0.65	-0.16	0.63

Survey Report

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #702H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 25 @ 3546.0usft (HP 465)
Site:	Convoy 28 State Com	**MD Reference:**	KB = 25 @ 3546.0usft (HP 465)
Well:	#702H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.14

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,762.0	88.20	178.50	12,472.9	-3,102.2	-34.2	3,102.1	2.66	-2.58	0.65
15,857.0	89.30	178.10	12,475.0	-3,197.1	-31.4	3,197.1	1.23	1.16	-0.42
15,920.0	89.00	178.00	12,475.9	-3,260.1	-29.3	3,260.0	0.50	-0.48	-0.16
15,952.0	88.30	177.60	12,476.7	-3,292.0	-28.1	3,292.0	2.52	-2.19	-1.25
16,046.0	89.30	178.20	12,478.7	-3,386.0	-24.6	3,385.9	1.24	1.06	0.64
16,141.0	89.40	179.50	12,479.7	-3,480.9	-22.7	3,480.9	1.37	0.11	1.37
16,236.0	89.70	179.50	12,480.5	-3,575.9	-21.9	3,575.9	0.32	0.32	0.00
16,330.0	88.80	177.90	12,481.7	-3,669.9	-19.7	3,669.9	1.95	-0.96	-1.70
16,424.0	89.10	180.10	12,483.4	-3,763.8	-18.1	3,763.8	2.36	0.32	2.34
16,487.0	87.30	178.80	12,485.4	-3,826.8	-17.5	3,826.8	3.52	-2.86	-2.06
16,518.0	88.40	178.90	12,486.6	-3,857.8	-16.9	3,857.8	3.56	3.55	0.32
16,565.0	90.10	179.80	12,487.2	-3,904.8	-16.3	3,904.8	4.09	3.62	1.91
16,613.0	90.20	180.30	12,487.1	-3,952.8	-16.4	3,952.7	1.06	0.21	1.04
16,706.0	88.70	180.20	12,488.0	-4,045.8	-16.8	4,045.7	1.62	-1.61	-0.11
16,800.0	92.40	180.10	12,487.1	-4,139.7	-17.0	4,139.7	3.94	3.94	-0.11
16,863.0	92.20	179.40	12,484.5	-4,202.7	-16.8	4,202.7	1.15	-0.32	-1.11
16,894.0	90.80	179.00	12,483.7	-4,233.7	-16.3	4,233.7	4.70	-4.52	-1.29
16,988.0	91.30	177.80	12,482.0	-4,327.6	-13.7	4,327.6	1.38	0.53	-1.28
17,051.0	92.70	177.30	12,479.8	-4,390.5	-11.0	4,390.5	2.36	2.22	-0.79
17,082.0	93.30	177.70	12,478.2	-4,421.5	-9.7	4,421.4	2.33	1.94	1.29
17,176.0	91.60	180.10	12,474.2	-4,515.3	-7.9	4,515.3	3.13	-1.81	2.55
17,271.0	92.10	180.30	12,471.1	-4,610.3	-8.2	4,610.3	0.57	0.53	0.21
17,365.0	92.70	180.00	12,467.1	-4,704.2	-8.4	4,704.2	0.71	0.64	-0.32
17,460.0	89.30	183.00	12,465.5	-4,799.1	-10.9	4,799.1	4.77	-3.58	3.16
17,461.6	89.31	182.99	12,465.5	-4,800.8	-11.0	4,800.8	1.13	0.85	-0.74
TGT 2(Con 28 ST Com #702H)									
17,554.0	90.10	182.30	12,466.0	-4,893.0	-15.3	4,893.0	1.13	0.85	-0.74
17,649.0	88.50	182.10	12,467.1	-4,988.0	-18.9	4,987.9	1.70	-1.68	-0.21
17,712.0	88.00	182.10	12,469.1	-5,050.9	-21.2	5,050.8	0.79	-0.79	0.00
17,744.0	88.30	182.00	12,470.1	-5,082.8	-22.4	5,082.8	0.99	0.94	-0.31
17,839.0	89.80	181.60	12,471.7	-5,177.8	-25.4	5,177.7	1.63	1.58	-0.42
17,886.0	92.10	182.50	12,470.9	-5,224.7	-27.0	5,224.7	5.25	4.89	1.91
17,933.0	93.10	182.80	12,468.8	-5,271.6	-29.2	5,271.6	2.22	2.13	0.64
18,028.0	93.50	184.40	12,463.3	-5,366.3	-35.2	5,366.2	1.73	0.42	1.68
18,122.0	89.40	183.10	12,460.9	-5,460.0	-41.3	5,460.0	4.58	-4.36	-1.38
18,216.0	87.10	182.30	12,463.8	-5,553.9	-45.7	5,553.8	2.59	-2.45	-0.85
18,273.0	86.30	183.10	12,467.1	-5,610.7	-48.4	5,610.7	1.98	-1.40	1.40
18,310.0	85.80	181.40	12,469.6	-5,647.6	-49.9	5,647.5	4.78	-1.35	-4.59
18,357.0	88.00	177.90	12,472.2	-5,694.5	-49.6	5,694.5	8.79	4.68	-7.45
18,404.0	88.60	177.20	12,473.6	-5,741.5	-47.6	5,741.4	1.96	1.28	-1.49
18,451.0	88.30	177.20	12,474.8	-5,788.4	-45.3	5,788.3	0.64	-0.64	0.00
18,498.0	87.90	177.20	12,476.4	-5,835.3	-43.0	5,835.3	0.85	-0.85	0.00
18,592.0	90.20	175.70	12,477.9	-5,929.1	-37.2	5,929.1	2.92	2.45	-1.60
18,686.0	89.80	177.90	12,477.9	-6,023.0	-31.9	6,022.9	2.38	-0.43	2.34

Survey Report

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #702H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 25 @ 3546.0usft (HP 465)
Site:	Convoy 28 State Com	**MD Reference:**	KB = 25 @ 3546.0usft (HP 465)
Well:	#702H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.14

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,780.0	89.20	177.90	12,478.8	-6,116.9	-28.5	6,116.8	0.64	-0.64	0.00
18,874.0	88.20	177.20	12,480.9	-6,210.8	-24.4	6,210.7	1.30	-1.06	-0.74
18,969.0	88.50	177.20	12,483.6	-6,305.6	-19.8	6,305.6	0.32	0.32	0.00
19,064.0	87.90	177.30	12,486.6	-6,400.5	-15.3	6,400.4	0.64	-0.63	0.11
19,159.0	88.00	176.60	12,490.0	-6,495.3	-10.2	6,495.3	0.74	0.11	-0.74
19,186.0	89.00	176.70	12,490.7	-6,522.2	-8.6	6,522.2	3.72	3.70	0.37
19,253.0	89.50	177.40	12,491.6	-6,589.1	-5.2	6,589.1	1.28	0.75	1.04
19,300.0	92.80	178.60	12,490.7	-6,636.1	-3.5	6,636.1	7.47	7.02	2.55
19,348.0	92.40	178.60	12,488.5	-6,684.0	-2.4	6,684.0	0.83	-0.83	0.00
19,395.0	91.60	178.50	12,486.8	-6,731.0	-1.2	6,731.0	1.72	-1.70	-0.21
19,443.0	90.70	178.00	12,485.9	-6,778.9	0.3	6,778.9	2.14	-1.88	-1.04
19,506.0	91.90	179.90	12,484.4	-6,841.9	1.4	6,841.9	3.57	1.90	3.02
19,537.0	91.80	180.10	12,483.4	-6,872.9	1.4	6,872.9	0.72	-0.32	0.65
19,601.0	91.40	180.60	12,481.7	-6,936.9	1.1	6,936.9	1.00	-0.63	0.78
19,632.0	90.90	180.60	12,481.0	-6,967.8	0.7	6,967.8	1.61	-1.61	0.00
19,695.0	91.10	180.10	12,479.9	-7,030.8	0.3	7,030.8	0.85	0.32	-0.79
19,727.0	90.90	180.00	12,479.4	-7,062.8	0.3	7,062.8	0.70	-0.63	-0.31
19,774.0	90.20	180.00	12,478.9	-7,109.8	0.3	7,109.8	1.49	-1.49	0.00
19,821.0	89.80	179.40	12,478.9	-7,156.8	0.6	7,156.8	1.53	-0.85	-1.28
19,863.7	90.89	178.86	12,478.7	-7,199.6	1.2	7,199.5	2.84	2.54	-1.27
TGT 3(Con 28 ST Com #702H)									
19,884.0	91.40	178.60	12,478.3	-7,219.8	1.7	7,219.8	2.84	2.54	-1.27
19,916.0	91.20	178.60	12,477.5	-7,251.8	2.4	7,251.8	0.63	-0.63	0.00
20,010.0	90.70	179.80	12,476.0	-7,345.8	3.8	7,345.8	1.38	-0.53	1.28
20,074.0	90.40	179.40	12,475.4	-7,409.8	4.2	7,409.8	0.78	-0.47	-0.63
20,105.0	90.60	179.80	12,475.1	-7,440.8	4.4	7,440.8	1.44	0.65	1.29
20,168.0	89.60	178.60	12,475.0	-7,503.8	5.3	7,503.8	2.48	-1.59	-1.90
20,200.0	89.50	178.40	12,475.2	-7,535.7	6.1	7,535.7	0.70	-0.31	-0.63
20,263.0	89.10	178.70	12,476.0	-7,598.7	7.7	7,598.7	0.79	-0.63	0.48
20,294.0	89.50	178.70	12,476.4	-7,629.7	8.4	7,629.7	1.29	1.29	0.00
20,389.0	89.20	179.80	12,477.5	-7,724.7	9.7	7,724.7	1.20	-0.32	1.16
20,484.0	88.70	179.20	12,479.2	-7,819.7	10.5	7,819.7	0.82	-0.53	-0.63
20,578.0	90.30	179.40	12,480.0	-7,913.7	11.7	7,913.7	1.72	1.70	0.21
20,625.0	90.50	179.40	12,479.7	-7,960.7	12.1	7,960.7	0.43	0.43	0.00
20,673.0	90.50	179.20	12,479.3	-8,008.7	12.7	8,008.7	0.42	0.00	-0.42
20,720.0	90.40	179.10	12,478.9	-8,055.6	13.4	8,055.7	0.30	-0.21	-0.21
20,768.0	89.40	178.60	12,479.0	-8,103.6	14.4	8,103.6	2.33	-2.08	-1.04
20,863.0	90.30	180.50	12,479.2	-8,198.6	15.1	8,198.6	2.21	0.95	2.00
20,910.0	89.80	180.40	12,479.2	-8,245.6	14.8	8,245.6	1.08	-1.06	-0.21
20,957.0	89.10	180.00	12,479.6	-8,292.6	14.6	8,292.6	1.72	-1.49	-0.85
21,021.0	91.00	180.00	12,479.6	-8,356.6	14.6	8,356.6	2.97	2.97	0.00
21,052.0	91.30	180.90	12,479.0	-8,387.6	14.4	8,387.6	3.06	0.97	2.90
21,115.0	89.20	180.20	12,478.7	-8,450.6	13.8	8,450.6	3.51	-3.33	-1.11

Survey Report

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #702H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 25 @ 3546.0usft (HP 465)
Site:	Convoy 28 State Com	**MD Reference:**	KB = 25 @ 3546.0usft (HP 465)
Well:	#702H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.14

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
21,147.0	88.60	180.10	12,479.3	-8,482.6	13.7	8,482.6	1.90	-1.88	-0.31
21,210.0	90.60	181.40	12,479.8	-8,545.6	12.8	8,545.6	3.79	3.17	2.06
21,242.0	90.50	181.20	12,479.4	-8,577.6	12.1	8,577.6	0.70	-0.31	-0.63
21,305.0	91.60	182.00	12,478.3	-8,640.5	10.4	8,640.5	2.16	1.75	1.27
21,337.0	91.50	182.00	12,477.4	-8,672.5	9.2	8,672.5	0.31	-0.31	0.00
21,400.0	90.00	181.20	12,476.6	-8,735.5	7.5	8,735.5	2.70	-2.38	-1.27
21,431.0	89.70	180.80	12,476.7	-8,766.5	6.9	8,766.5	1.61	-0.97	-1.29
21,526.0	89.80	180.40	12,477.1	-8,861.5	6.0	8,861.5	0.43	0.11	-0.42
21,589.0	89.90	180.90	12,477.3	-8,924.5	5.2	8,924.5	0.81	0.16	0.79
21,621.0	89.10	180.60	12,477.5	-8,956.5	4.8	8,956.5	2.67	-2.50	-0.94
21,715.0	90.50	180.00	12,477.9	-9,050.5	4.3	9,050.5	1.62	1.49	-0.64
21,778.0	89.30	179.40	12,478.0	-9,113.4	4.7	9,113.4	2.13	-1.90	-0.95
21,810.0	88.60	179.40	12,478.6	-9,145.4	5.0	9,145.4	2.19	-2.19	0.00
21,905.0	92.10	180.00	12,478.0	-9,240.4	5.5	9,240.4	3.74	3.68	0.63
21,968.0	92.40	181.70	12,475.5	-9,303.4	4.6	9,303.4	2.74	0.48	2.70
21,999.0	92.70	182.30	12,474.1	-9,334.3	3.5	9,334.3	2.16	0.97	1.94
22,063.0	90.90	181.60	12,472.1	-9,398.2	1.3	9,398.2	3.02	-2.81	-1.09
22,094.0	88.70	181.20	12,472.2	-9,429.2	0.5	9,429.2	7.21	-7.10	-1.29
22,157.0	87.80	180.80	12,474.2	-9,492.2	-0.6	9,492.2	1.56	-1.43	-0.63
22,189.0	87.60	180.70	12,475.4	-9,524.2	-1.0	9,524.2	0.70	-0.63	-0.31
22,283.0	87.40	180.70	12,479.5	-9,618.1	-2.1	9,618.1	0.21	-0.21	0.00
22,347.0	86.50	180.20	12,482.9	-9,682.0	-2.6	9,682.0	1.61	-1.41	-0.78
22,416.0	86.50	180.20	12,487.2	-9,750.8	-2.9	9,750.8	0.00	0.00	0.00
PBHL(Con 28 ST Com #702H)									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
12,355.6	12,245.3	241.0	-68.1	HL Crossing, MD:12355.6', TVD:12245.3',N/S:241.0', E/W:-68.1', INC:47.70
22,317.0	12,481.2	-9,652.0	-2.5	HL Crossing, MD:22317.0', TVD:12481.2',N/S:-9652.0', E/W:-2.5', INC:86.92
22,347.0	12,482.9	-9,682.0	-2.6	Final MWD Survey (MD=22347.0')
22,416.0	12,487.2	-9,750.8	-2.9	Final Projection to Bit (MD=22416.0')

Checked By: _____ Approved By: _____ Date: _____

eog resources

Lea County, NM (NAD 83 NME)

Convoy 28 State Com #702H

HP 465

Plan #3

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

Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.50°

Magnetic Field
Strength: 47873.1snT
Dip Angle: 60.03°
Date: 11/30/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.50°
To convert a Magnetic Direction to a True Direction, Add 6.90° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

WELL DETAILS: #702H

3521.0
KB = 25 @ 3546.0usft (HP 465)

Northing	Easting	Latitude	Longitude
435254.00	777172.00	32° 11' 39.453 N	103° 34' 15.403 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	1292.0	0.35	292.00	1291.9	-3.2	-9.6	0.00	0.00	3.2	
2	1487.6	4.00	5.00	1487.3	3.8	-9.6	2.00	77.90	-3.8	
3	5209.3	4.00	5.00	5200.0	262.4	13.0	0.00	0.00	-262.4	
4	5566.9	10.67	342.16	5554.5	306.4	4.0	2.00	-35.25	-306.4	
5	6498.1	10.67	342.16	6469.6	470.5	-48.8	0.00	0.00	-470.6	
6	7031.6	0.00	0.00	7000.0	517.7	-64.0	2.00	180.00	-517.8	
7	11931.7	0.00	0.00	11900.1	517.7	-64.0	0.00	0.00	-517.8	
8	12826.6	89.49	179.58	12473.0	-50.2	-59.8	10.00	179.58	50.1	
9	15076.7	89.49	179.58	12493.0	-2300.1	-43.2	0.00	0.00	2300.0	TGT 1(Con 28 ST Com #702H)
10	15102.2	90.00	179.58	12493.1	-2325.6	-43.0	2.00	-0.11	2325.6	
11	17576.7	90.00	179.58	12493.0	-4800.0	-24.7	0.00	0.00	4800.0	TGT 2(Con 28 ST Com #702H)
12	17594.8	89.64	179.58	12493.1	-4818.1	-24.5	2.00	180.00	4818.1	
13	19976.8	89.64	179.58	12508.0	-7200.0	-6.9	0.00	0.00	7200.0	TGT 3(Con 28 ST Com #702H)
14	19989.2	89.89	179.58	12508.1	-7212.4	-6.8	2.00	0.00	7212.4	
15	22528.8	89.89	179.58	12513.0	-9752.0	12.0	0.00	0.00	9752.0	PBHL(Con 28 ST Com #702H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
AC TGT(Con 28 ST Com #702H)	6119.2	407.7	-28.6	435661.70	777143.39
KOP(Con 28 ST Com #702H)	11900.1	517.7	-64.0	435771.69	777108.00
TGT 1(Con 28 ST Com #702H)	12493.0	-2300.1	-43.2	432953.90	777128.82
TGT 2(Con 28 ST Com #702H)	12493.0	-4800.0	-24.7	430454.00	777147.33
FTP(Con 28 ST Com #702H)	12498.0	241.0	-62.0	435495.00	777110.00
TGT 3(Con 28 ST Com #702H)	12508.0	-7200.0	-6.9	428054.00	777165.10
PBHL(Con 28 ST Com #702H)	12513.0	-9752.0	12.0	425502.00	777184.00