

HOBBS OCD

OCT 31 2018

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Barlow 34 Fed Com

#711H

OH

Design: OH

Midland PVA

22 August, 2018





Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #711H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3342.0usft
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25' @ 3342.0usft
Well:	#711H	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:	Barlow 34 Fed Com		
Site Position:		Northing:	364,874.00 usft
From:	Map	Easting:	778,981.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 0' 3.879 N
		Longitude:	103° 34' 0.167 W
		Grid Convergence:	0.41 °

Well		#711H				
Well Position	+N/-S	0.0 usft	Northing:	364,998.00 usft	Latitude:	32° 0' 3.903 N
	+E/-W	0.0 usft	Easting:	782,006.00 usft	Longitude:	103° 33' 25.037 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,317.0 usft	

Wellbore:	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/6/2018	6.81	59.84	47,691,24046101

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	354.08	



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Survey Program	Date	8/22/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
154.0	957.0	Wildfire Corrected for GN + 25' KB (OH)	MWD	OWSG MWD - Standard	
1,056.0	17,168.0	Drilltech MWD (OH)	MWD	OWSG MWD - Standard	

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/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
154.0	0.70	312.43	154.0	0.6	-0.7	0.45	0.45	0.00	0.0	0.0
183.0	0.10	178.43	183.0	0.7	-0.8	2.66	-2.07	-462.07	0.0	0.0
270.0	0.20	260.43	270.0	0.6	-1.0	0.24	0.11	94.25	0.0	0.0
302.0	0.20	118.43	302.0	0.6	-1.0	1.18	0.00	-443.75	0.0	0.0
396.0	0.70	287.43	396.0	0.7	-1.4	0.95	0.53	179.79	0.0	0.0
428.0	0.80	299.43	428.0	0.9	-1.8	0.58	0.31	37.50	0.0	0.0
459.0	0.80	308.43	459.0	1.1	-2.1	0.40	0.00	29.03	0.0	0.0
490.0	0.80	356.43	490.0	1.4	-2.3	2.10	0.00	154.84	0.0	0.0
522.0	0.60	294.43	522.0	1.7	-2.5	2.32	-0.62	-193.75	0.0	0.0
552.0	0.20	82.43	552.0	1.8	-2.6	2.59	-1.33	493.33	0.0	0.0
584.0	0.80	342.43	584.0	2.0	-2.6	2.68	1.87	-312.50	0.0	0.0
677.0	0.80	315.43	677.0	3.1	-3.2	0.40	0.00	-29.03	0.0	0.0
708.0	0.20	23.43	708.0	3.3	-3.4	2.41	-1.94	219.35	0.0	0.0
739.0	0.80	309.43	739.0	3.5	-3.5	2.48	1.94	-238.71	0.0	0.0
770.0	0.50	31.43	770.0	3.8	-3.6	2.85	-0.97	264.52	0.0	0.0
801.0	1.00	355.43	801.0	4.1	-3.5	2.14	1.61	-116.13	0.0	0.0
833.0	0.80	325.43	833.0	4.6	-3.7	1.58	-0.62	-93.75	0.0	0.0
864.0	0.60	40.43	864.0	4.9	-3.7	2.80	-0.65	241.94	0.0	0.0
895.0	0.70	330.43	895.0	5.2	-3.7	2.42	0.32	-225.81	0.0	0.0
926.0	0.70	331.43	926.0	5.5	-3.9	0.04	0.00	3.23	0.0	0.0



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MD Reference: KB = 25' @ 3342.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
957.0	0.60	37.43	957.0	5.8	-3.8	2.30	-0.32	212.90	0.0	0.0
1,056.0	0.62	14.14	1,055.9	6.7	-3.4	0.25	0.02	-23.52	-0.1	0.2
1,149.0	0.70	285.19	1,148.9	7.4	-3.9	1.00	0.09	-95.65	-1.2	0.3
1,241.0	0.97	261.72	1,240.9	7.4	-5.2	0.47	0.29	-25.51	-2.9	0.2
1,333.0	1.93	247.75	1,332.9	6.7	-7.4	1.10	1.04	-15.18	-3.3	-0.7
1,426.0	2.64	243.62	1,425.8	5.2	-10.7	0.78	0.76	-4.44	-2.0	-1.2
1,519.0	3.43	235.27	1,518.7	2.6	-14.9	0.97	0.85	-8.98	-0.2	-1.2
1,613.0	3.69	235.88	1,612.5	-0.7	-19.8	0.28	0.28	0.65	0.5	-0.6
1,708.0	4.48	233.42	1,707.3	-4.6	-25.3	0.85	0.83	-2.59	0.3	0.2
1,803.0	4.40	232.81	1,802.0	-9.0	-31.2	0.10	-0.08	-0.64	-0.5	1.1
1,898.0	4.40	229.91	1,896.7	-13.5	-36.8	0.23	0.00	-3.05	-1.3	2.1
1,993.0	4.31	229.47	1,991.4	-18.2	-42.3	0.10	-0.09	-0.46	-2.1	3.4
2,088.0	4.22	227.27	2,086.2	-22.9	-47.6	0.20	-0.09	-2.32	-2.8	4.7
2,182.0	4.04	227.10	2,179.9	-27.5	-52.6	0.19	-0.19	-0.18	-3.2	6.3
2,276.0	4.22	237.91	2,273.7	-31.6	-58.0	0.85	0.19	11.50	-2.2	7.7
2,370.0	3.96	236.06	2,367.4	-35.2	-63.6	0.31	-0.28	-1.97	-2.6	8.1
2,464.0	3.87	234.92	2,461.2	-38.9	-68.9	0.13	-0.10	-1.21	-2.6	8.6
2,559.0	4.22	241.77	2,556.0	-42.4	-74.6	0.63	0.37	7.21	-1.6	9.1
2,654.0	4.04	237.64	2,650.7	-45.8	-80.5	0.37	-0.19	-4.35	-2.5	9.1
2,749.0	3.61	235.18	2,745.5	-49.3	-85.8	0.48	-0.45	-2.59	-2.6	9.5
2,843.0	4.13	234.30	2,839.3	-53.0	-90.9	0.56	0.55	-0.94	-2.6	10.2
2,936.0	4.31	235.36	2,932.1	-56.9	-96.5	0.21	0.19	1.14	-2.8	10.9
3,030.0	3.87	231.31	3,025.8	-60.9	-101.9	0.56	-0.47	-4.31	-3.8	11.5
3,122.0	4.57	235.18	3,117.6	-65.0	-107.3	0.82	0.76	4.21	-3.4	12.6
3,215.0	5.89	237.20	3,210.2	-69.7	-114.4	1.43	1.42	2.17	-5.0	13.2
3,308.0	5.72	237.64	3,302.7	-74.7	-122.3	0.19	-0.18	0.47	-7.8	13.7
3,401.0	5.63	236.94	3,395.2	-79.7	-130.1	0.12	-0.10	-0.75	-10.7	14.0



Midland PVA



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TVD Reference: KB = 25' @ 3342.0usft
MD Reference: KB = 25' @ 3342.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Survey											
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)	
3,495.0	5.01	235.09	3,488.8	-84.6	-137.3	0.68	-0.66	-1.97	-13.3	14.1	
3,589.0	3.87	230.96	3,582.6	-88.9	-143.1	1.26	-1.21	-4.39	-15.1	13.9	
3,681.0	3.61	236.85	3,674.4	-92.4	-148.0	0.50	-0.28	6.40	-13.2	16.2	
3,774.0	3.78	238.78	3,767.2	-95.6	-153.0	0.23	0.18	2.08	-12.2	16.9	
3,868.0	4.57	244.67	3,860.9	-98.8	-159.1	0.96	0.84	6.27	-10.6	18.0	
3,961.0	5.80	249.88	3,953.5	-102.0	-166.8	1.41	1.32	5.58	-11.0	18.2	
4,055.0	5.01	250.56	4,047.1	-105.0	-175.2	0.84	-0.84	0.74	-13.1	17.3	
4,148.0	4.40	250.21	4,139.8	-107.6	-182.3	0.66	-0.66	-0.38	-14.5	16.1	
4,242.0	3.78	258.82	4,233.6	-109.4	-188.8	0.93	-0.66	9.16	-12.3	16.6	
4,336.0	3.34	268.93	4,327.4	-110.1	-194.6	0.81	-0.47	10.76	-9.2	16.0	
4,430.0	2.90	282.03	4,421.2	-109.6	-199.6	0.89	-0.47	13.94	-5.5	13.9	
4,523.0	2.55	297.85	4,514.1	-108.2	-203.7	0.89	-0.38	17.01	-2.3	10.1	
4,616.0	2.37	320.96	4,607.1	-105.7	-206.8	1.08	-0.19	24.85	-0.8	4.6	
4,711.0	2.73	332.12	4,702.0	-102.2	-209.1	0.64	0.38	11.75	-4.3	-1.6	
4,805.0	1.93	339.24	4,795.9	-98.7	-210.7	0.90	-0.85	7.57	-9.2	-7.2	
4,899.0	1.23	272.89	4,889.9	-97.2	-212.3	1.94	-0.74	-70.59	6.8	-16.2	
4,918.0	1.41	280.36	4,908.9	-97.1	-212.7	1.31	0.95	39.32	5.3	-17.8	
5,070.0	3.69	234.48	5,060.7	-99.6	-218.5	1.90	1.50	-30.18	21.4	-8.8	
5,166.0	5.10	233.51	5,156.4	-104.0	-224.5	1.47	1.47	-1.01	23.8	-7.5	
5,260.0	7.30	232.11	5,249.9	-110.1	-232.5	2.35	2.34	-1.49	23.5	-5.9	
5,355.0	7.30	230.08	5,344.1	-117.7	-241.9	0.27	0.00	-2.14	21.3	-3.8	
5,449.0	7.74	229.82	5,437.3	-125.6	-251.3	0.47	0.47	-0.28	18.6	-2.2	
5,544.0	7.21	228.50	5,531.5	-133.7	-260.7	0.59	-0.56	-1.39	15.9	-0.1	
5,639.0	7.03	228.59	5,625.7	-141.5	-269.5	0.19	-0.19	0.09	13.7	1.7	
5,733.0	6.86	230.08	5,719.1	-148.9	-278.1	0.26	-0.18	1.59	12.0	3.0	
5,828.0	6.77	230.26	5,813.4	-156.1	-286.8	0.10	-0.09	0.19	10.4	4.4	
5,923.0	6.86	229.20	5,907.7	-163.4	-295.4	0.16	0.09	-1.12	8.7	6.2	



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #711H
Project:	Lee County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3342.0usft
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25' @ 3342.0usft
Well:	#711H	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)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
6,018.0	6.16	227.45	6,002.1	-170.6	-303.4	0.77	-0.74	-1.84	7.4	8.2
6,112.0	6.07	227.01	6,095.6	-177.4	-310.8	0.11	-0.10	-0.47	6.8	10.3
6,206.0	7.39	244.15	6,188.9	-183.4	-319.9	2.54	1.40	18.23	8.4	8.4
6,301.0	7.21	244.15	6,283.2	-188.7	-330.7	0.19	-0.19	0.00	6.0	7.5
6,396.0	6.86	245.11	6,377.4	-193.6	-341.2	0.39	-0.37	1.01	4.3	6.5
6,490.0	6.77	246.26	6,470.8	-198.2	-351.4	0.17	-0.10	1.22	2.9	5.3
6,584.0	6.77	247.40	6,564.1	-202.6	-361.6	0.14	0.00	1.21	1.5	3.9
6,679.0	6.95	246.61	6,658.4	-207.0	-372.0	0.21	0.19	-0.83	-0.2	2.5
6,774.0	6.77	244.50	6,752.8	-211.7	-382.4	0.33	-0.19	-2.22	-1.9	1.4
6,868.0	6.42	246.70	6,846.1	-216.2	-392.2	0.46	-0.37	2.34	-3.0	0.4
6,962.0	6.16	245.03	6,939.6	-220.4	-401.6	0.34	-0.28	-1.78	-3.7	-0.9
7,056.0	5.80	244.41	7,033.1	-224.6	-410.5	0.39	-0.38	-0.66	-3.8	-1.9
7,151.0	5.63	244.41	7,127.6	-228.7	-419.0	0.18	-0.18	0.00	-3.5	-2.8
7,245.0	5.45	242.04	7,221.1	-232.8	-427.1	0.31	-0.19	-2.52	-2.7	-3.7
7,339.0	5.01	240.37	7,314.8	-236.9	-434.6	0.50	-0.47	-1.78	-1.5	-4.1
7,433.0	4.66	235.45	7,408.4	-241.1	-441.3	0.58	-0.37	-5.23	0.7	-4.0
7,528.0	4.31	235.18	7,503.1	-245.3	-447.4	0.37	-0.37	-0.28	2.2	-3.4
7,622.0	4.31	235.09	7,596.9	-249.3	-453.2	0.01	0.00	-0.10	1.0	-3.0
7,717.0	4.13	233.95	7,691.6	-253.4	-458.9	0.21	-0.19	-1.20	-3.1	-2.8
7,811.0	2.02	227.89	7,785.5	-256.5	-462.9	2.27	-2.24	-8.45	-7.5	-3.4
7,906.0	1.06	238.70	7,880.4	-258.1	-464.9	1.05	-1.01	11.38	-10.5	-1.6
8,001.0	1.14	220.59	7,975.4	-259.2	-466.2	0.37	0.08	-19.06	-11.3	-5.1
8,096.0	0.79	217.16	8,070.4	-260.5	-467.2	0.37	-0.37	-3.61	-12.6	-5.8
8,190.0	1.32	207.06	8,164.4	-262.0	-468.1	0.60	0.56	-10.74	-13.1	-8.1
8,285.0	1.32	200.11	8,259.4	-264.0	-469.0	0.17	0.00	-7.32	-14.2	-9.7
8,378.0	1.14	209.25	8,352.3	-265.8	-469.8	0.29	-0.19	9.83	-17.5	-7.2
8,473.0	1.32	208.46	8,447.3	-267.6	-470.8	0.19	0.19	-0.83	-19.5	-7.4



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8,568.0	0.97	65.46	8,542.3	-268.2	-470.6	2.29	-0.37	-150.53	20.1	-6.4	
8,661.0	1.23	50.61	8,635.3	-267.2	-469.1	0.41	0.28	-15.97	19.3	-1.3	
8,755.0	1.32	71.62	8,729.3	-266.3	-467.3	0.50	0.10	22.35	15.5	-7.8	
8,850.0	1.14	91.22	8,824.2	-265.9	-465.3	0.48	-0.19	20.63	10.1	-12.1	
8,945.0	0.70	117.76	8,919.2	-266.2	-463.9	0.63	-0.46	27.94	2.1	-14.9	
9,039.0	0.79	120.66	9,013.2	-266.8	-462.8	0.10	0.10	3.09	0.2	-15.0	
9,134.0	1.06	147.73	9,108.2	-267.9	-461.8	0.53	0.28	28.49	-8.1	-13.1	
9,229.0	1.06	157.93	9,203.2	-269.5	-461.0	0.20	0.00	10.74	-12.1	-11.3	
9,323.0	0.88	140.08	9,297.2	-270.8	-460.2	0.37	-0.19	-18.99	-9.6	-14.8	
9,418.0	1.41	357.88	9,392.2	-270.2	-459.7	2.29	0.56	-149.68	16.0	5.3	
9,512.0	2.37	349.26	9,486.1	-267.1	-460.2	1.06	1.02	-9.17	11.9	7.5	
9,607.0	2.20	332.39	9,581.0	-263.6	-461.4	0.73	-0.18	-17.78	5.5	10.1	
9,702.0	1.93	332.92	9,676.0	-260.6	-462.9	0.28	-0.28	0.56	2.2	10.1	
9,797.0	1.93	342.06	9,770.9	-257.6	-464.2	0.32	0.00	9.62	0.6	9.8	
9,891.0	1.06	344.78	9,864.9	-255.3	-464.9	0.93	-0.93	2.89	-1.4	9.9	
9,986.0	1.49	326.94	9,959.9	-253.4	-465.8	0.61	0.45	-18.78	-6.4	8.7	
10,080.0	2.46	310.77	10,053.8	-251.0	-468.0	1.18	1.03	-17.20	-11.8	6.2	
10,174.0	1.58	314.02	10,147.8	-248.8	-470.4	0.94	-0.94	3.46	-14.7	7.0	
10,268.0	0.44	105.10	10,241.7	-248.0	-471.0	2.10	-1.21	160.72	17.0	1.6	
10,362.0	1.06	355.24	10,335.7	-247.2	-470.7	1.36	0.66	-116.87	-8.0	15.1	
10,457.0	1.49	345.04	10,430.7	-245.2	-471.1	0.51	0.45	-10.74	-12.7	13.3	
10,551.0	1.58	335.46	10,524.7	-242.8	-472.0	0.29	0.10	-10.19	-17.2	10.8	
10,646.0	1.85	345.40	10,619.6	-240.1	-472.9	0.42	0.28	10.46	-17.9	13.8	
10,740.0	0.97	47.27	10,713.6	-238.1	-472.7	1.74	-0.94	65.82	2.2	23.7	
10,835.0	0.70	49.56	10,808.6	-237.2	-471.7	0.29	-0.28	2.41	1.8	23.6	
10,929.0	1.14	29.08	10,902.6	-236.0	-470.8	0.58	0.47	-21.79	-8.0	22.5	
11,024.0	0.97	359.72	10,997.6	-234.4	-470.3	0.59	-0.18	-30.91	-19.7	15.2	



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #711H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3342.0usft
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25' @ 3342.0usft
Well:	#711H	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)	DLog (°/100usft)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
11,117.0	1.06	314.81	11,090.6	-233.0	-470.9	0.84	0.10	-48.29	-26.1	-3.7	
11,211.0	0.88	241.07	11,184.6	-232.7	-472.2	1.25	-0.19	-78.45	-4.8	-26.9	
11,305.0	1.06	213.30	11,278.5	-233.8	-473.3	0.53	0.19	-29.54	6.8	-26.4	
11,400.0	0.62	282.91	11,373.5	-234.4	-474.3	1.08	-0.46	73.27	-23.2	-14.8	
11,495.0	0.88	287.65	11,468.5	-234.1	-475.5	0.28	0.27	4.99	-25.6	-12.8	
11,589.0	0.53	255.57	11,562.5	-234.0	-476.6	0.55	-0.37	-34.13	-15.9	-24.8	
11,711.0	0.44	289.50	11,684.5	-234.0	-477.6	0.24	-0.07	27.81	-28.0	-11.4	
11,826.0	0.88	352.34	11,799.5	-232.9	-478.1	0.68	0.38	54.64	-24.0	20.1	
11,910.0	2.37	4.58	11,883.5	-230.6	-478.1	1.81	1.77	14.57	-21.5	24.9	
KOP 11910.0' MD; 11883.5' TVD; -230.6'; -478.1'; 2.37											
11,920.0	2.55	5.08	11,893.5	-230.1	-478.0	1.81	1.80	4.99	-21.7	25.1	
11,967.0	8.27	359.63	11,940.2	-225.7	-478.0	12.21	12.17	-11.60	-27.5	22.8	
12,014.0	12.75	4.29	11,986.4	-217.2	-477.6	9.69	9.53	9.91	-28.8	24.7	
12,059.6	20.85	9.04	12,030.1	-204.1	-475.9	18.00	17.76	10.42	-30.2	25.7	
FTP Crossing 12059.6' MD; 12030.1' TVD; -204.1'; -475.9'; 20.85											
12,061.0	21.10	9.13	12,031.4	-203.6	-475.9	18.00	17.86	6.40	-30.3	25.7	
12,108.0	27.00	8.95	12,074.3	-184.7	-472.9	12.55	12.55	-0.38	-35.1	22.9	
12,155.0	31.48	7.54	12,115.3	-162.0	-469.6	9.64	9.53	-3.00	-39.6	18.9	
12,202.0	36.23	3.24	12,154.3	-135.9	-467.2	11.31	10.11	-9.15	-43.2	13.6	
12,249.0	40.98	1.48	12,191.0	-106.6	-466.0	10.37	10.11	-3.74	-44.7	11.0	
12,296.0	46.96	1.13	12,224.8	-74.0	-465.3	12.73	12.72	-0.74	-45.3	9.8	
12,343.0	48.89	0.86	12,256.3	-39.2	-464.7	4.13	4.11	-0.57	-44.0	8.7	
12,390.0	52.58	2.45	12,286.0	-2.8	-463.6	8.28	7.85	3.38	-39.7	7.8	
12,437.0	56.63	3.15	12,313.3	35.5	-461.7	8.70	8.62	1.49	-33.8	5.5	
12,484.0	61.38	3.59	12,337.5	75.7	-459.3	10.14	10.11	0.94	-26.5	2.5	
12,531.0	64.46	3.94	12,358.9	117.4	-456.6	6.59	6.55	0.74	-17.7	-0.9	
12,578.0	69.29	1.83	12,377.3	160.6	-454.4	11.07	10.28	-4.49	-7.4	-3.7	



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #711H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3342.0usft
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25' @ 3342.0usft
Well:	#711H	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)	
12,625.0	75.62	359.72	12,391.5	205.4	-453.8	14.13	13.47	-4.49	2.8	-4.6	
12,672.0	83.80	359.28	12,399.9	251.6	-454.3	17.43	17.40	-0.94	10.9	-4.5	
12,719.0	92.77	357.70	12,401.3	298.5	-455.5	19.38	19.09	-3.36	12.2	-3.6	
12,766.0	93.12	358.05	12,398.9	345.4	-457.2	1.05	0.74	0.74	9.7	-2.2	
12,813.0	89.87	0.86	12,397.6	392.4	-457.7	9.14	-6.91	5.98	8.4	-2.1	
12,861.0	90.48	359.99	12,397.5	440.4	-457.3	2.21	1.27	-1.81	8.2	-2.8	
12,962.0	88.29	359.02	12,398.6	541.3	-458.2	2.37	-2.17	-0.96	9.2	-2.7	
13,056.0	88.81	0.34	12,400.9	635.3	-458.7	1.51	0.55	1.40	11.4	-2.9	
13,150.0	88.81	0.78	12,402.9	729.3	-457.8	0.47	0.00	0.47	13.3	-4.5	
13,243.0	88.90	0.60	12,404.8	822.3	-456.7	0.22	0.10	-0.19	15.0	-6.3	
13,338.0	90.40	1.13	12,405.3	917.2	-455.2	1.67	1.58	0.56	15.4	-8.4	
13,432.0	91.36	1.48	12,403.9	1,011.2	-453.1	1.09	1.02	0.37	13.9	-11.3	
13,525.0	91.98	1.30	12,401.2	1,104.1	-450.8	0.69	0.67	-0.19	11.0	-14.2	
13,619.0	89.43	0.60	12,400.0	1,198.1	-449.3	2.81	-2.71	-0.74	9.8	-16.5	
13,713.0	88.72	0.43	12,401.5	1,292.1	-448.4	0.78	-0.76	-0.18	11.1	-18.0	
13,806.0	89.25	1.74	12,403.2	1,385.1	-446.7	1.52	0.57	1.41	12.7	-20.4	
13,900.0	87.85	359.99	12,405.6	1,479.0	-445.3	2.38	-1.49	-1.86	14.9	-22.6	
13,995.0	87.67	359.90	12,409.3	1,573.9	-445.4	0.21	-0.19	-0.09	18.5	-23.2	
14,089.0	91.36	358.23	12,410.1	1,667.9	-446.9	4.31	3.93	-1.78	19.2	-22.3	
14,120.0	92.07	358.58	12,409.1	1,698.9	-447.8	2.55	2.29	1.13	18.2	-21.7	
14,183.0	91.98	358.84	12,406.9	1,761.8	-449.2	0.44	-0.14	0.41	15.9	-20.8	
14,277.0	92.42	359.02	12,403.3	1,855.7	-450.9	0.51	0.47	0.19	12.2	-19.7	
14,370.0	91.36	358.05	12,400.2	1,948.6	-453.3	1.54	-1.14	-1.04	9.0	-18.0	
14,464.0	89.34	356.82	12,399.7	2,042.5	-457.5	2.52	-2.15	-1.31	8.3	-14.5	
14,558.0	87.76	356.65	12,402.1	2,136.4	-462.9	1.69	-1.68	-0.18	10.5	-9.8	
14,652.0	88.55	355.59	12,405.1	2,230.1	-469.2	1.41	0.84	-1.13	13.4	-4.2	
14,745.0	89.25	357.96	12,406.9	2,322.9	-474.4	2.66	0.75	2.55	15.1	0.4	



Midland PVA



Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Barlow 34 Fed Com
Well: #711H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #711H
TVD Reference: KB = 25' @ 3342.0usft
MD Reference: KB = 25' @ 3342.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)	
14,839.0	90.22	0.51	12,407.3	2,416.9	-475.7	2.90	1.03	2.71	15.4	0.9	
14,932.0	90.66	0.16	12,406.6	2,509.9	-475.2	0.60	0.47	-0.38	14.6	-0.3	
15,026.0	89.43	0.78	12,406.5	2,603.9	-474.4	1.47	-1.31	0.66	14.4	-1.8	
15,120.0	89.96	1.30	12,407.0	2,697.9	-472.7	0.79	0.56	0.55	14.7	-4.2	
15,213.0	90.66	1.57	12,406.5	2,790.8	-470.4	0.81	0.75	0.29	14.1	-7.2	
15,306.0	88.72	1.66	12,407.0	2,883.8	-467.7	2.09	-2.09	0.10	14.5	-10.5	
15,399.0	89.52	2.01	12,408.4	2,976.7	-464.8	0.94	0.86	0.38	15.8	-14.1	
15,492.0	89.16	0.34	12,409.5	3,069.7	-462.8	1.84	-0.39	-1.80	16.7	-16.8	
15,586.0	90.13	0.51	12,410.1	3,163.7	-462.1	1.05	1.03	0.18	17.2	-18.1	
15,680.0	90.75	1.74	12,409.4	3,257.7	-460.3	1.47	0.66	1.31	16.4	-20.7	
15,773.0	89.69	0.95	12,409.0	3,350.7	-458.1	1.42	-1.14	-0.85	15.9	-23.6	
15,866.0	87.93	0.43	12,410.9	3,443.6	-457.0	1.97	-1.89	-0.56	17.7	-25.4	
15,960.0	89.43	358.32	12,413.1	3,537.6	-458.0	2.75	1.60	-2.24	19.7	-25.0	
16,053.0	90.40	358.93	12,413.2	3,630.6	-460.3	1.23	1.04	0.66	19.7	-23.5	
16,147.0	91.45	359.37	12,411.7	3,724.5	-461.7	1.21	1.12	0.47	18.1	-22.8	
16,241.0	89.52	358.05	12,410.9	3,818.5	-463.8	2.49	-2.05	-1.40	17.2	-21.4	
16,335.0	89.16	357.09	12,412.0	3,912.4	-467.8	1.09	-0.38	-1.02	18.1	-18.1	
16,427.0	89.16	358.58	12,413.4	4,004.3	-471.2	1.62	0.00	1.62	19.4	-15.3	
16,520.0	90.75	358.67	12,413.4	4,097.3	-473.5	1.71	1.71	0.10	19.3	-13.7	
16,614.0	90.66	359.28	12,412.3	4,191.3	-475.1	0.66	-0.10	0.65	18.0	-12.8	
16,708.0	92.68	0.07	12,409.5	4,285.2	-475.7	2.31	2.15	0.84	15.2	-12.9	
16,801.0	91.63	359.72	12,406.0	4,378.2	-475.8	1.19	-1.13	-0.38	11.5	-13.4	
16,896.0	84.94	358.84	12,408.9	4,473.1	-477.0	7.10	-7.04	-0.93	14.2	-13.0	
16,989.0	86.35	358.03	12,416.0	4,565.7	-481.2	3.37	1.52	-3.02	21.2	-9.5	
17,084.0	88.64	356.47	12,420.1	4,660.4	-487.4	2.45	2.41	0.46	25.2	-4.0	
17,103.0	88.81	355.59	12,420.5	4,679.4	-488.7	4.71	0.89	-4.62	25.6	-2.8	

Last MWD Survey (MD = 17103.0)



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #711H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3342.0usft
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25' @ 3342.0usft
Well:	#711H	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)	BuId (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
17,168.0	88.81	355.59	12,421.9	4,744.1	-493.7	0.00	0.00	0.00	26.9	1.7	
Projection to Bit (MD = 17168.0)											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,910.0	11,883.5	-230.6	-478.1	KOP 11910.0' MD; 11883.5' TVD; -230.6'; -478.1'; 2.37
12,059.6	12,030.1	-204.1	-475.9	FTP Crossing 12059.6' MD; 12030.1' TVD; -204.1'; -475.9'; 20.85
17,103.0	12,420.5	4,679.4	-488.7	Last MWD Survey (MD = 17103.0)
17,168.0	12,421.9	4,744.1	-493.7	Projection to Bit (MD = 17168.0)

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

Barlow 34 Fed Com

#711H

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 8.40°
To convert a Magnetic Direction to a True Direction, Add 6.81° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

WELL DETAILS: #711H

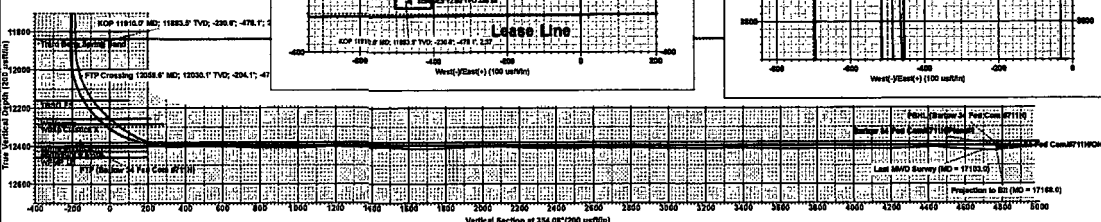
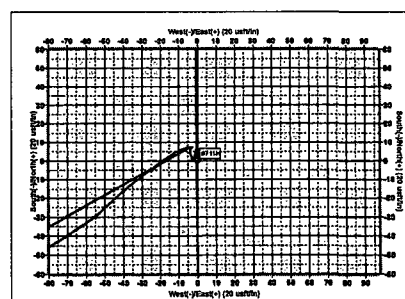
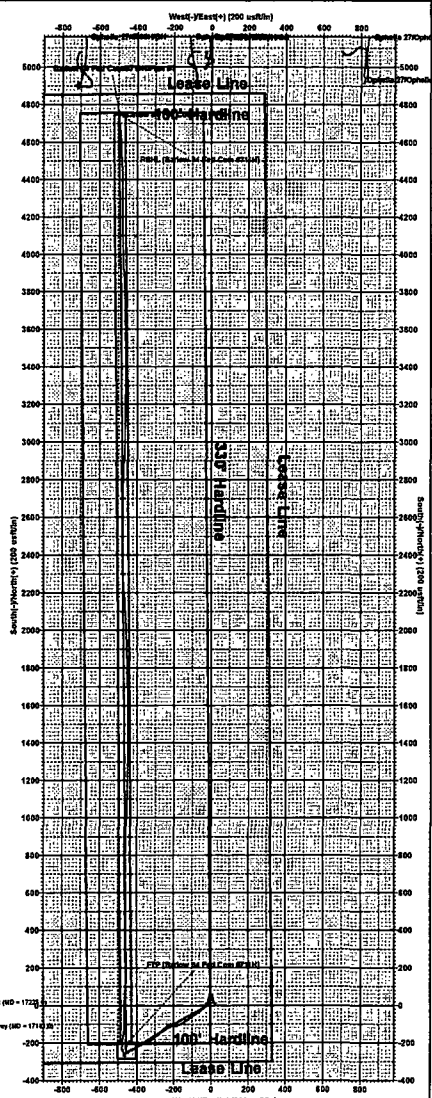
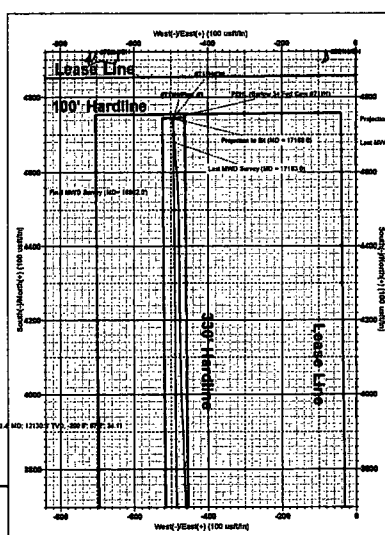
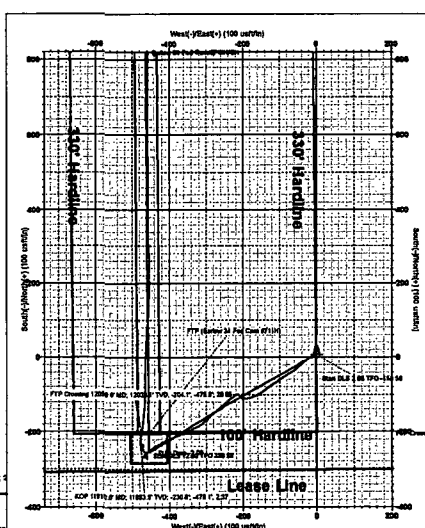
	+N-S	+E-W	North	KB = 25° @ 3342.0usft	Longitude	Slot
	0.0	0.0	364958.00	East	782008.00	32° 0' 3.903 N
						103° 33' 25.0 37 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target
1	957.0	0.60	37.43	957.0	5.8	-3.9	0.00	0.00	6.2	
2	1200.1	0.60	37.43	1200.0	7.8	-2.3	0.00	0.00	8.0	
3	1427.9	4.00	240.83	1427.7	4.9	-8.5	2.00	-199.59	5.8	
4	5008.9	4.00	240.83	5000.0	-116.8	-226.7	0.00	0.00	-92.8	
5	5105.6	5.93	238.96	5096.3	-121.1	-233.9	2.00	-5.68	-96.3	
6	7456.1	5.93	238.98	7434.2	-246.1	-441.9	0.00	0.00	-199.2	
7	7752.4	0.00	0.00	7730.0	-254.0	-455.0	2.00	180.00	-205.7	
8	11933.9	0.00	0.00	11911.5	-254.0	-455.0	0.00	0.00	-205.7	
9	12683.3	89.92	359.58	12389.0	222.8	-458.5	12.00	359.58	268.9	
10	17206.6	89.92	359.58	12395.0	4746.0	-492.0	0.00	0.00	4771.4	PBHL (Barlow 34 Fed Com #711H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	North	East	Shape
FTP (Barlow 34 Fed Com #711H)	12395.0	-254.0	-455.0	364784.00	781961.00	Point
PBHL (Barlow 34 Fed Com #711H)	12395.0	4746.0	-492.0	389744.00	781614.00	Polygon



100' Hardline
100' Parabola
100' Parabola
100' Parabola

Bureau of Land Management

WATER PRODUCTION & DISPOSAL INFORMATION

LEASE: BARLOW 34 FEDERAL

Lease no NMNM 02965A

SECTION 34, T26S, R33E

**Wells: Barlow 34 Federal Com #711H 30-025-44390
Barlow 34 Federal Com #714H 30-025-44393
Barlow 34 Federal Com #715H 30-025-44394**

1. Name of formation producing water on lease: **WOLFCAMP**
2. Amount of water produced from all formations in barrels per day **3000-5000 BWPD**
3. How water is stored on lease **4 - 400 BBL Tanks**
4. How water is moved to disposal facility **Pipeline/Trucked**
5. Disposal Facility:

EOG Red Hills Gathering System - 97% of water, 3% water

- a. Name of Operator/facility well name & number

MESQUITE SWD, INC

OWL SWD OPERATING, LLC

Cotton Draw SWD #66

Maralo Sholes B #2

30-025-22024

30-025-09806

E-10-25S-32E

P-25-25S-36E

Permit No SWD 1306-0

Permit No SWD 1127-0

DACO OPERATING, LLC

Challenger Fortress

42-301-32997

Loving County, Texas

UIC NO 114148

Type of facility or wells **SWD**