

30-025-44351

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Antietam 9 Fed Com

#708H

OH

Design: OH

Midland PVA

11 May, 2018



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #708H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3452.0usft (H&P 653)
Site:	Antietam 9 Fed Com	MD Reference:	KB = 25' @ 3452.0usft (H&P 653)
Well:	#708H	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	Antietam 9 Fed Com		
Site Position:		Northing:	419,815.00 usft
From:	Map	Easting:	774,698.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 9' 6.852 N
		Longitude:	103° 34' 45.452 W
		Grid Convergence:	0.40 °

Well	#708H		
Well Position	+N-S	0.0 usft	Northing: 419,767.00 usft
	+E-W	0.0 usft	Easting: 775,993.00 usft
Position Uncertainty	0.0 usft		Latitude: 32° 9' 6.287 N
			Longitude: 103° 34' 30.393 W
			Wellhead Elevation: usft
			Ground Level: 3,427.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	8/16/2017	6.93
			Dip Angle (°) 59.99
			Field Strength (nT) 47,877.89575102

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°) 184.10



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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Survey Program		Date			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
194.0	1,191.0	True Directional (OH)	MWD	OWSG MWD - Standard	
1,349.0	19,772.0	Drilltech MWD (OH)	MWD	OWSG MWD - Standard	

MD (usft)	Inc (")	Asl (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
194.0	0.62	212.55	194.0	-0.9	-0.6	0.32	0.32	0.00	0.0	0.0
374.0	1.23	204.11	374.0	-3.5	-1.9	0.35	0.34	-4.69	0.0	0.0
552.0	1.32	207.98	551.9	-7.0	-3.6	0.07	0.05	2.17	0.0	0.0
705.0	1.32	240.67	704.9	-9.4	-8.0	0.49	0.00	21.37	0.0	0.0
861.0	1.23	289.27	860.9	-9.8	-9.1	0.67	-0.06	31.15	0.0	0.0
1,047.0	1.23	296.83	1,046.8	-8.2	-12.8	0.09	0.00	4.06	0.0	0.0
1,191.0	1.32	295.60	1,190.8	-6.8	-15.7	0.07	0.06	-0.85	0.0	0.0
1,349.0	0.88	334.74	1,348.7	-4.9	-17.8	0.54	-0.28	24.77	0.8	-1.7
1,534.0	1.93	339.05	1,533.7	-0.7	-19.6	0.57	0.57	2.33	0.8	-6.1
1,724.0	2.64	325.51	1,723.5	5.9	-23.2	0.47	0.37	-7.13	0.4	-9.9
1,914.0	3.52	297.83	1,913.3	12.2	-30.8	0.90	0.46	-14.57	1.9	-10.9
2,104.0	3.52	295.63	2,102.9	17.5	-41.2	0.07	0.00	-1.16	-2.7	-11.1
2,294.0	3.69	294.22	2,292.5	22.5	-52.1	0.10	0.09	-0.74	-7.8	-11.2
2,484.0	3.87	299.15	2,482.1	28.1	-63.2	0.20	0.09	2.59	-14.6	-10.5
2,674.0	4.13	305.03	2,671.7	35.2	-74.4	0.26	0.14	3.09	-22.3	-9.4
2,863.0	3.52	307.14	2,860.2	42.6	-84.6	0.33	-0.32	1.12	-28.8	-9.7
3,053.0	3.52	312.94	3,049.9	50.1	-93.6	0.19	0.00	3.05	-35.0	-8.2
3,243.0	2.90	331.40	3,239.6	58.3	-100.1	0.63	-0.33	9.72	-40.8	1.2
3,433.0	4.48	296.07	3,429.2	65.7	-109.1	1.42	0.83	-18.59	-38.7	-25.5
3,623.0	5.10	281.30	3,618.6	70.7	-124.0	0.72	0.33	-7.77	-40.1	-34.9



Midland PVA

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 Project: Lea County, NM (NAD 83 NME)
 Site: Antietam 8 Fed Com
 Well: #708H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #708H
 TVD Reference: KB = 25' @ 3452.0usft (H&P 653)
 MD Reference: KB = 25' @ 3452.0usft (H&P 653)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	NIS (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
3,812.0	3.43	269.61	3,807.0	72.3	-137.9	0.99	-0.88	-6.19	-40.1	-41.1	
4,002.0	2.11	274.62	3,996.8	72.5	-147.1	0.71	-0.69	2.64	-46.5	-34.7	
4,192.0	2.55	279.90	4,186.6	73.5	-154.8	0.26	0.23	2.78	-50.8	-28.2	
4,381.0	2.02	257.57	4,375.5	73.5	-162.2	0.54	-0.28	-11.81	-38.3	-43.0	
4,571.0	2.02	249.49	4,565.4	71.6	-168.6	0.15	0.00	-4.25	-33.9	-43.6	
4,761.0	2.11	236.92	4,755.3	68.6	-174.6	0.24	0.05	-6.62	-26.8	-45.1	
4,902.0	2.20	234.99	4,896.2	65.6	-179.0	0.08	0.06	-1.37	-25.5	-38.8	
5,090.0	4.13	274.01	5,083.9	64.0	-188.7	1.48	1.03	20.76	-31.6	-7.2	
5,280.0	6.24	305.21	5,273.1	70.4	-204.0	1.81	1.11	16.42	-14.4	1.5	
5,469.0	11.52	290.27	5,459.8	82.9	-230.1	3.03	2.79	-7.90	-6.2	-8.6	
5,659.0	11.96	287.19	5,645.8	95.3	-266.7	0.40	0.23	-1.62	-7.3	-11.7	
5,850.0	12.57	286.84	5,832.5	107.2	-305.5	0.32	0.32	-0.18	-10.5	-13.4	
6,040.0	11.78	284.64	6,018.2	118.0	-344.1	0.48	-0.42	-1.16	-12.9	-14.8	
6,230.0	11.08	282.97	6,204.4	127.0	-380.6	0.41	-0.37	-0.88	-13.0	-14.6	
6,420.0	10.99	287.72	6,390.9	136.7	-415.7	0.48	-0.05	2.50	-13.3	-14.0	
6,610.0	11.61	288.16	6,577.3	148.1	-451.1	0.33	0.33	0.23	-13.5	-16.2	
6,800.0	11.52	286.23	6,763.4	159.4	-487.5	0.21	-0.05	-1.02	-13.9	-18.4	
6,990.0	8.35	281.83	6,950.5	167.5	-519.2	1.71	-1.67	-2.32	-7.9	-19.1	
7,180.0	5.19	278.40	7,139.2	171.6	-541.2	1.68	-1.66	-1.81	6.6	-16.5	
7,370.0	3.43	287.63	7,328.6	174.6	-555.1	0.99	-0.93	4.86	14.7	-17.4	
7,560.0	2.02	209.50	7,518.5	173.4	-562.2	1.90	-0.74	-41.12	18.7	17.3	
7,750.0	0.97	213.19	7,708.4	169.1	-564.7	0.55	-0.55	1.94	15.3	17.7	
7,940.0	0.88	205.98	7,898.4	166.5	-566.2	0.08	-0.05	-3.79	9.9	19.3	
8,130.0	1.06	185.24	8,088.4	163.4	-567.0	0.21	0.09	-10.92	-0.7	21.0	
8,319.0	1.41	193.06	8,277.3	159.4	-567.7	0.21	0.19	4.14	-1.9	21.1	
8,510.0	1.23	195.96	8,468.3	155.1	-568.8	0.10	-0.09	1.52	-5.2	21.3	
8,699.0	1.32	186.03	8,657.2	151.0	-569.6	0.13	0.05	-5.25	-13.0	19.8	



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Site:	Anfetam 9 Fed Com	MD Reference:	KB = 25' @ 3452.0usft (H&P 653)
Well:	#708H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	NIS (usft)	ENW (usft)	DLeg (°/100usft)	Bolid (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
8,889.0	1.41	183.31	8,847.2	146.5	-570.0	0.06	0.05	-1.43	-18.4	19.0	
9,079.0	1.14	185.33	9,037.1	142.3	-570.3	0.14	-0.14	1.06	-22.0	19.7	
9,269.0	0.35	168.45	9,227.1	139.8	-570.3	0.43	-0.42	-8.88	-29.1	12.0	
9,459.0	1.67	347.13	9,417.1	142.0	-570.8	1.06	0.69	94.04	27.2	-11.3	
9,618.0	1.85	310.31	9,576.0	145.9	-573.3	0.71	0.11	-23.16	24.1	5.9	
9,808.0	1.23	210.82	9,766.0	146.1	-576.7	1.25	-0.33	-52.36	-11.3	19.8	
9,998.0	0.97	203.26	9,955.9	142.9	-578.4	0.16	-0.14	-3.98	-17.5	17.9	
10,187.0	0.82	216.70	10,144.9	140.6	-579.6	0.21	-0.19	7.11	-15.4	21.8	
10,377.0	1.58	216.26	10,334.9	137.7	-581.8	0.51	0.51	-0.23	-19.2	21.7	
10,567.0	0.97	335.09	10,524.8	137.0	-584.0	1.17	-0.32	62.54	27.9	8.7	
10,756.0	1.32	300.38	10,713.8	139.6	-586.6	0.40	0.19	-18.37	14.5	22.1	
10,946.0	1.14	275.68	10,903.8	140.9	-590.3	0.29	-0.09	-13.00	0.1	25.2	
11,136.0	1.76	300.02	11,093.7	142.5	-594.7	0.45	0.33	12.81	5.8	23.8	
11,325.0	0.97	230.59	11,282.7	143.0	-598.5	0.89	-0.42	-36.74	-22.8	11.1	
11,516.0	1.41	206.77	11,473.6	139.8	-600.8	0.34	0.23	-12.47	-29.2	0.3	
11,681.0	0.70	260.21	11,638.6	137.8	-602.7	0.69	-0.43	32.39	-19.4	25.2	
11,802.0	0.79	132.68	11,759.6	137.2	-602.8	1.11	0.07	-105.40	-8.6	-31.3	
11,849.0	1.06	144.90	11,806.6	138.6	-602.3	0.71	0.57	26.00	-15.8	-28.7	
11,897.0	5.63	160.89	11,854.5	134.0	-601.3	9.63	9.52	33.31	-25.8	-23.2	
11,992.0	17.85	161.42	11,947.3	115.7	-595.1	12.86	12.86	0.56	-36.5	-19.7	
12,039.0	20.31	160.72	11,991.7	101.2	-590.1	5.28	5.23	-1.49	-40.3	-15.8	
12,086.0	24.27	164.76	12,035.2	84.2	-584.9	9.03	8.43	8.60	-42.8	-7.8	
12,133.0	28.84	169.86	12,077.3	63.7	-580.4	10.86	9.72	10.85	-42.9	0.6	
12,182.0	37.28	173.37	12,118.3	37.2	-576.6	17.68	17.22	7.16	-42.4	6.8	
12,229.0	45.99	175.57	12,153.4	6.2	-573.6	18.79	18.53	4.68	-43.5	11.0	
12,276.0	52.41	177.94	12,184.1	-29.3	-571.6	14.18	13.66	5.04	-45.6	14.1	
12,323.0	55.57	179.18	12,211.7	-67.3	-570.7	7.05	6.72	2.64	-46.7	15.5	



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Well:	#708H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	NIS (usft)	EW (usft)	DLeg (°/100usft)	Bolid (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
12,371.0	59.00	177.33	12,237.6	-107.7	-569.4	7.85	7.15	-3.85	-45.8	15.8
12,379.0	60.23	177.54	12,241.7	-114.6	-569.1	15.49	15.33	2.56	-45.4	16.2
FTP Crossing 12379.0 MDI 12241.7 TVD: -114.6° -569.1° 60.23										
12,418.0	66.21	178.47	12,259.3	-149.3	-567.9	15.49	15.34	2.40	-43.7	17.6
12,466.0	69.91	179.79	12,277.2	-193.9	-567.3	8.12	7.71	2.75	-40.8	18.4
12,513.0	72.63	180.58	12,292.3	-238.4	-567.4	6.00	5.79	1.68	-35.7	18.1
12,561.0	73.60	180.23	12,306.2	-284.3	-567.7	2.14	2.02	-0.73	-26.9	17.6
12,605.0	78.44	180.05	12,316.9	-327.0	-567.8	11.01	11.00	-0.41	-17.2	17.0
12,653.0	84.77	182.43	12,323.9	-374.4	-568.9	14.07	13.19	4.96	-10.3	15.6
12,700.0	90.48	182.16	12,325.8	-421.3	-570.7	12.16	12.15	-0.57	-8.5	13.3
12,748.0	91.45	180.58	12,325.0	-469.3	-571.9	3.86	2.02	-3.29	-9.4	11.9
12,843.0	91.80	180.32	12,322.3	-564.3	-572.6	0.46	0.37	-0.27	-12.2	10.5
12,938.0	90.66	180.49	12,320.3	-659.2	-573.3	1.21	-1.20	0.18	-14.4	9.2
13,033.0	89.69	179.97	12,320.0	-754.2	-573.7	1.16	-1.02	-0.55	-14.8	8.2
13,128.0	88.02	179.26	12,321.9	-849.2	-573.0	1.91	-1.76	-0.75	-13.0	8.2
13,223.0	87.41	178.47	12,325.7	-944.1	-571.2	1.05	-0.64	-0.83	-9.3	9.5
13,318.0	89.78	179.35	12,328.0	-1,039.1	-569.4	2.66	2.49	0.93	-7.7	10.6
13,413.0	91.10	177.33	12,327.3	-1,134.0	-566.6	2.54	1.39	-2.13	-9.4	12.7
13,602.0	88.81	179.00	12,327.4	-1,322.9	-560.6	1.50	-1.21	0.88	-11.1	17.5
13,697.0	88.55	177.94	12,329.6	-1,417.8	-558.0	1.15	-0.27	-1.12	-9.9	19.4
13,792.0	91.71	179.00	12,329.4	-1,512.8	-555.5	3.51	3.33	1.12	-11.1	21.3
13,887.0	87.85	178.74	12,329.7	-1,607.7	-553.6	4.07	-4.06	-0.27	-11.7	22.5
13,982.0	86.61	180.93	12,334.3	-1,702.6	-553.3	2.65	-1.31	2.31	-8.0	22.1
14,077.0	89.96	180.05	12,337.2	-1,797.6	-554.2	3.65	3.53	-0.93	-6.1	20.7
14,172.0	89.25	179.44	12,337.8	-1,892.6	-553.7	0.99	-0.75	-0.64	-6.4	20.4
14,363.0	89.69	178.65	12,339.6	-2,083.5	-550.5	0.47	0.23	-0.41	-6.6	22.3
14,458.0	89.43	177.24	12,340.3	-2,178.5	-547.1	1.51	-0.27	-1.46	-6.8	25.1



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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14,553.0	87.76	178.91	12,342.7	-2,273.4	-543.9	2.49	-1.76	1.76	-5.4	27.6
14,743.0	93.12	179.44	12,341.2	-2,463.3	-541.2	2.83	2.82	0.28	-8.8	29.1
14,838.0	92.24	178.56	12,336.8	-2,558.2	-539.6	1.31	-0.93	-0.93	-14.1	30.1
15,028.0	90.92	182.87	12,331.5	-2,748.0	-541.9	2.37	-0.69	2.27	-21.3	26.4
15,122.0	91.36	183.48	12,329.6	-2,841.9	-547.1	0.80	0.47	0.65	-24.1	20.5
15,217.0	84.24	181.37	12,333.3	-2,936.6	-551.2	7.82	-7.49	-2.22	-21.4	15.9
15,312.0	88.02	182.69	12,339.7	-3,031.3	-554.5	4.21	3.98	1.39	-15.9	11.9
15,407.0	87.76	181.02	12,343.2	-3,126.2	-557.6	1.78	-0.27	-1.76	-13.4	8.2
15,502.0	88.29	181.90	12,346.5	-3,221.1	-560.0	1.08	0.56	0.93	-11.1	5.1
15,597.0	93.39	182.95	12,345.1	-3,316.0	-564.0	5.48	5.37	1.11	-13.4	0.4
15,692.0	88.11	181.64	12,343.8	-3,410.9	-567.8	5.73	-5.56	-1.38	-15.6	-4.0
15,787.0	89.25	180.76	12,346.0	-3,505.8	-569.8	1.52	1.20	-0.93	-14.3	-6.7
15,819.0	86.97	178.12	12,347.1	-3,537.8	-569.5	10.90	-7.12	-8.25	-13.6	-6.6
15,882.0	88.20	178.12	12,349.7	-3,600.7	-567.4	1.95	1.95	0.00	-11.6	-5.0
15,977.0	89.69	173.55	12,351.5	-3,695.4	-560.5	5.06	1.57	-4.81	-10.8	1.3
16,009.0	88.02	172.41	12,352.1	-3,727.2	-556.6	6.32	-5.22	-3.56	-10.5	4.9
16,104.0	91.80	175.31	12,352.3	-3,821.6	-546.5	5.01	3.98	3.05	-11.2	14.5
16,199.0	90.92	175.13	12,350.0	-3,916.2	-538.6	0.95	-0.93	-0.19	-14.5	21.8
16,294.0	92.15	174.43	12,347.5	-4,010.8	-529.9	1.49	1.29	-0.74	-17.9	29.8
16,389.0	90.22	176.80	12,345.5	-4,105.5	-522.7	3.22	-2.03	2.49	-20.9	36.4
16,578.0	88.37	182.16	12,347.8	-4,294.4	-520.9	3.00	-0.98	2.84	-20.4	36.8
16,674.0	88.11	179.79	12,350.8	-4,390.3	-522.6	2.48	-0.27	-2.47	-18.4	34.5
16,863.0	89.78	182.43	12,354.3	-4,579.2	-526.2	1.65	0.88	1.40	-16.8	29.6
16,958.0	89.08	179.09	12,355.2	-4,674.2	-527.5	3.59	-0.74	-3.52	-16.8	27.7
17,148.0	88.55	184.54	12,359.1	-4,864.0	-533.5	2.88	-0.28	2.87	-14.8	20.3
17,243.0	90.66	183.39	12,359.8	-4,958.8	-540.1	2.53	2.22	-1.21	-15.1	13.1
17,338.0	91.19	178.38	12,358.3	-5,053.7	-541.5	5.30	0.56	-5.27	-17.5	11.0



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #708H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3452.0ust (H&P 653)
Site:	Antietam 9 Fed Com	MD Reference:	KB = 25' @ 3452.0ust (H&P 653)
Well:	#708H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (ust)	Inc (°)	Azi (azimuth) (°)	TVD (ust)	NIS (ust)	EWI (ust)	DLeg (°/100ust)	Bolid (°/100ust)	Turn (°/100ust)	High to Plan (ust)	Right to Plan (ust)	
17,528.0	91.71	182.10	12,353.4	-5,242.4	-558.8	7.22	0.27	7.22	-24.3	-7.4	
17,630.0	90.13	186.91	12,351.8	-5,343.0	-575.7	5.32	-1.55	-5.09	-27.0	-25.0	
17,662.0	91.19	180.93	12,351.4	-5,374.9	-577.9	18.98	3.31	-18.69	-27.6	-27.5	
17,694.0	92.68	175.40	12,350.3	-5,406.8	-578.8	17.89	4.66	-17.28	-29.0	-26.7	
17,726.0	93.56	172.93	12,348.6	-5,438.6	-573.6	8.18	2.75	-7.72	-31.1	-23.5	
17,821.0	88.20	172.41	12,347.1	-5,532.8	-561.5	5.67	-5.64	-0.55	-33.4	-12.2	
17,915.0	88.72	172.06	12,349.7	-5,625.9	-548.8	0.67	0.55	-0.37	-31.8	-0.2	
18,011.0	88.72	174.96	12,351.8	-5,721.2	-537.9	3.02	0.00	3.02	-30.7	10.0	
18,106.0	88.29	174.69	12,354.3	-5,815.8	-529.4	0.53	-0.45	-0.28	-29.2	17.9	
18,201.0	88.81	179.70	12,356.7	-5,910.6	-524.7	5.30	0.55	5.27	-27.6	22.0	
18,295.0	89.96	181.55	12,357.7	-6,004.6	-525.8	2.32	1.22	1.97	-27.6	20.3	
18,390.0	90.13	179.44	12,357.6	-6,099.6	-526.6	2.23	0.18	-2.22	-28.5	18.8	
18,485.0	90.57	180.76	12,357.1	-6,194.6	-526.7	1.46	0.46	1.39	-30.0	18.0	
18,580.0	87.67	178.74	12,358.5	-6,289.6	-526.3	3.72	-3.05	-2.13	-29.4	17.8	
18,675.0	88.11	178.74	12,362.0	-6,384.5	-524.2	0.46	0.46	0.00	-26.8	19.2	
18,770.0	87.05	177.33	12,366.0	-6,479.4	-521.0	1.86	-1.12	-1.48	-23.7	21.8	
18,865.0	87.67	180.49	12,370.4	-6,574.2	-519.2	3.39	0.65	3.33	-20.2	23.0	
18,960.0	86.97	179.35	12,374.8	-6,669.1	-519.0	1.41	-0.74	-1.20	-16.6	22.5	
19,055.0	88.99	180.41	12,378.2	-6,764.1	-518.8	2.40	2.13	1.12	-14.2	22.0	
19,150.0	90.57	180.93	12,378.6	-6,859.0	-520.0	1.75	1.66	0.55	-14.7	20.3	
19,245.0	92.07	180.93	12,376.4	-6,954.0	-521.5	1.58	1.58	0.00	-17.8	18.1	
19,340.0	94.88	181.11	12,370.6	-7,048.8	-523.2	2.96	2.96	0.19	-24.4	15.8	
19,435.0	91.01	179.53	12,365.7	-7,143.7	-523.7	4.40	-4.07	-1.66	-30.2	14.6	
19,530.0	90.40	180.76	12,364.6	-7,238.6	-524.0	1.45	-0.84	1.29	-32.2	13.7	
19,624.0	89.69	179.53	12,364.5	-7,332.6	-524.2	1.51	-0.76	-1.31	-33.2	12.8	
19,666.4	89.18	178.89	12,364.9	-7,375.0	-523.6	1.93	-1.21	-1.50	-33.2	13.1	

LTP Crossing 19666.4' MD; 12364.9' TVD; -7375.0' -523.6' 89.18



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #708H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3452.0usft (H&P 653)
Site:	Antetam 9 Fed Com	MD Reference:	KB = 25' @ 3452.0usft (H&P 653)
Well:	#708H	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)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
19,718.0	88.55	178.12	12,365.9	-7,426.6	-522.3	1.93	-1.21	-1.50	-32.6	14.1
Last MWD Survey (MD = 19718.0)										
19,772.0	88.55	178.12	12,367.3	-7,480.6	-520.5	0.00	0.00	0.00	-32.2	15.5
Projection to Bit (MD = 19772.0)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,379.0	12,241.7	-114.6	-569.1	FTP Crossing 12379.0' MD; 12241.7' TVD; -114.6'; -569.1'; 60.23
19,666.4	12,364.9	-7,375.0	-523.6	LTP Crossing 19666.4' MD; 12364.9' TVD; -7375.0'; -523.6'; 89.18
19,718.0	12,365.9	-7,426.6	-522.3	Last MWD Survey (MD = 19718.0)
19,772.0	12,367.3	-7,480.6	-520.5	Projection to Bit (MD = 19772.0)

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Antietam 9 Fed Com #708H

H&P 653

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

WELL DETAILS: #708H

KB = 25' @ 3452.0usft (H&P 653)
Northing 419767.00 Easting 775993.00
Latitude 32° 0' 6.267 N Longitude 103° 34' 30.393 W



To convert a Magnetic Direction to a Grid Direction, Add 5.53°
To convert a Magnetic Direction to a True Direction, Add 5.53° East
To convert a True Direction to a Grid Direction, Subtract 0.40°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target
1	1191.0	1.32	295.60	1190.8	-6.8	-15.7	0.00	0.00	7.9	
2	1225.0	2.00	295.00	1224.8	-6.4	-16.6	2.00	-1.76	7.5	
3	4750.4	2.00	295.00	4748.0	45.6	-128.1	0.00	0.00	-36.3	
4	5215.6	11.26	284.49	5209.6	80.5	-179.5	2.00	-12.73	-47.5	
5	7092.6	11.26	284.49	7050.5	152.2	-534.5	0.00	0.00	-113.6	
6	7655.8	0.00	0.00	7610.0	166.0	-587.9	2.00	180.00	-123.5	
7	11902.5	0.00	0.00	11856.7	166.0	-587.9	0.00	0.00	-123.5	
8	12651.9	89.93	179.63	12334.2	-310.9	-584.8	12.00	179.63	351.9	
9	13301.9	89.93	179.63	12335.0	-960.9	-580.5	0.00	0.00	1000.0	TGT #1 (Antietam 9 Fed Com #708H)
10	13327.1	89.42	179.61	12335.1	-986.1	-580.4	2.00	-177.96	1025.1	
11	14305.1	89.42	179.61	12345.0	-1964.0	-573.7	0.00	0.00	2000.0	TGT #2 (Antietam 9 Fed Com #708H)
12	14305.4	89.43	179.61	12345.0	-1964.3	-573.7	2.00	3.50	2000.3	
13	18317.6	89.43	179.61	12385.0	-5976.2	-546.2	0.00	0.00	6000.0	TGT #6 (Antietam 9 Fed Com #708H)
14	18319.4	89.46	179.61	12385.0	-5978.0	-546.2	2.00	0.00	6001.8	
15	19816.5	89.46	179.61	12399.0	-7475.0	-536.0	0.00	0.00	7494.2	PBHL (Antietam 9 Fed Com #708H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
TGT #1 (Antietam 9 Fed Com #708H)	12335.0	-960.9	-580.5	418802.16	775412.48
TGT #2 (Antietam 9 Fed Com #708H)	12345.0	-1964.0	-573.7	417803.00	775419.22
TGT #6 (Antietam 9 Fed Com #708H)	12385.0	-5976.2	-546.2	413790.00	775446.75
PBHL (Antietam 9 Fed Com #708H)	12399.0	-7475.0	-536.0	412292.00	775457.80
FTP (Antietam 9 Fed Com #708H)	12320.0	-114.0	-688.0	419553.00	775407.50
TGT #3 (Antietam 9 Fed Com #708H)	12355.0	-2987.1	-565.8	416799.00	775426.78
TGT #4 (Antietam 9 Fed Com #708H)	12365.0	-3370.1	-560.0	415796.00	775433.04
TGT #5 (Antietam 9 Fed Com #708H)	12375.0	-4073.2	-553.1	414793.00	775439.50

