

30-025-44347

HOBBS OCD
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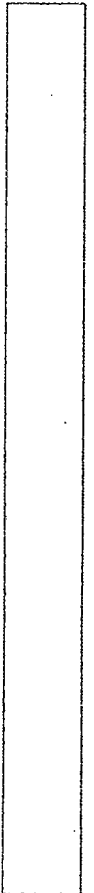
EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Antietam 9 Fed Com
#705H
OH

Survey: Intrepid MWD

Midland PVA

11 April, 2018





Midland PVA

Company: EOG Resources - Midland Project: Lea County, NM (NAD 83 NME) Site: Antietam 9 Fed Com Well: #705H Wellbore: OH Design: OH		Local Co-ordinate Reference: Well #705H TVD Reference: KB= 25' @ 3465.0usft (HP 462) MD Reference: KB= 25' @ 3465.0usft (HP 462) North Reference: Grid Survey Calculation Method: Minimum Curvature Database: EDM 5000.14													
Project Lea County, NM (NAD 83 NME)															
Map System: US State Plane 1983 Geo Datum: North American Datum 1983 Map Zone: New Mexico Eastern Zone		System Datum: Mean Sea Level													
Site Antietam 9 Fed Com															
Site Position: From: Map Position Uncertainty: 0.0 usft		Northing: 419,815.00 usft Easting: 774,698.00 usft Slot Radius: 13-3/16 " Latitude: 32° 9' 6.852 N Longitude: 103° 34' 45.452 W Grid Convergence: 0.40 °													
Well #705H															
Well Position +N-S 0.0 usft +E-W 0.0 usft Position Uncertainty 0.0 usft		Northing: 419,935.00 usft Easting: 774,246.00 usft Wellhead Elevation: usft Latitude: 32° 9' 8.071 N Longitude: 103° 34' 50.700 W Ground Level: 3,440.0 usft													
Wellbore OH															
<table border="1"> <thead> <tr> <th>Magnetics</th> <th>Model Name</th> <th>Sample Date</th> <th>Declination (°)</th> <th>Dip Angle (°)</th> <th>Field Strength (nT)</th> </tr> </thead> <tbody> <tr> <td></td> <td>IGRF2015</td> <td>3/19/2018</td> <td>6.87</td> <td>59.99</td> <td>47,816.97833830</td> </tr> </tbody> </table>				Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)		IGRF2015	3/19/2018	6.87	59.99	47,816.97833830
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)										
	IGRF2015	3/19/2018	6.87	59.99	47,816.97833830										
Design OH															
Audit Notes: Version: 1.0 Phase: ACTUAL Tie On Depth: 0.0															
<table border="1"> <thead> <tr> <th>Vertical Section:</th> <th>Depth From (TVD) (usft)</th> <th>+N-S (usft)</th> <th>+E-W (usft)</th> <th>Direction (°)</th> </tr> </thead> <tbody> <tr> <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>178.67</td> </tr> </tbody> </table>				Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)		0.0	0.0	0.0	178.67		
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)											
	0.0	0.0	0.0	178.67											



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3465.0usft (HP 462)
Site:	Antietam 9 Fed Com	MD Reference:	KB= 25' @ 3465.0usft (HP 462)
Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program	Date	4/11/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
198.0	1,240.0	Olebrook MWD (OH)	MWD	OWSG MWD - Standard	
1,318.0	19,810.0	Intrepid MWD (OH)	MWD	OWSG MWD - Standard	

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	NS (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
1,240.0	0.79	54.53	1,239.9	11.7	2.6	0.00	0.00	0.00	0.0	0.0
1,318.0	0.40	36.40	1,317.9	12.3	3.2	0.55	-0.50	-23.24	0.2	0.2
1,504.0	2.10	146.00	1,503.9	10.0	5.5	1.22	0.91	58.92	1.8	1.0
1,692.0	2.90	144.50	1,691.7	3.2	10.1	0.43	0.43	-0.80	-0.1	2.6
1,882.0	2.70	145.90	1,881.5	-4.4	15.4	0.11	-0.11	0.74	-2.9	4.3
2,072.0	2.90	146.20	2,071.2	-12.1	20.6	0.11	0.11	0.16	-5.7	5.9
2,261.0	3.70	143.00	2,259.9	-20.9	27.0	0.43	0.42	-1.69	-10.5	6.9
2,451.0	4.40	104.50	2,449.5	-27.6	37.7	1.45	0.37	-20.28	-14.4	-5.8
2,640.0	4.40	88.90	2,637.9	-29.3	52.0	0.63	0.00	-8.25	-13.4	-11.2
2,830.0	4.50	80.60	2,827.4	-28.0	66.6	0.34	0.05	-4.37	-13.2	-12.0
3,020.0	4.70	75.70	3,016.7	-24.8	81.5	0.23	0.11	-2.58	-14.5	-10.6
3,210.0	5.00	71.80	3,206.1	-20.3	96.9	0.23	0.16	-2.05	-17.2	-8.0
3,399.0	4.10	98.90	3,394.5	-18.8	111.4	1.22	-0.48	14.34	-20.0	2.3
3,589.0	2.90	106.80	3,584.1	-21.2	122.7	0.68	-0.63	4.16	-18.4	2.0
3,779.0	1.10	93.70	3,774.0	-22.7	129.1	0.97	-0.95	-6.89	-11.7	-4.2
3,969.0	1.20	89.60	3,964.0	-22.8	133.0	0.07	0.05	-2.16	-8.9	-5.2
4,159.0	1.20	72.20	4,153.9	-22.2	136.8	0.19	0.00	-9.16	-10.9	-8.2
4,349.0	2.30	90.70	4,343.8	-21.6	142.5	0.64	0.58	9.74	-18.6	-3.7
4,538.0	0.30	22.30	4,532.8	-21.2	146.5	1.17	-1.06	-36.19	-5.3	-22.2
4,728.0	2.10	119.30	4,722.7	-22.5	149.8	1.14	0.95	51.05	-24.8	8.5
4,921.0	0.90	144.90	4,915.7	-25.5	153.7	0.70	-0.62	13.26	-23.4	19.9



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Site:	Antietam 9 Fed Com	MD Reference:	KB= 25' @ 3465.0usft (HP 462)
Well:	#705H	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)	
5,025.0	0.80	157.80	5,019.7	-26.8	154.5	0.21	-0.10	12.40	-19.9	24.8	
5,214.0	0.70	179.10	5,208.6	-29.2	155.0	0.16	-0.05	11.27	-11.9	30.8	
5,403.0	0.70	174.30	5,397.6	-31.5	155.1	0.03	0.00	-2.54	-16.7	29.6	
5,593.0	0.60	169.00	5,587.6	-33.6	155.4	0.06	-0.05	-2.79	-21.6	27.8	
5,782.0	0.70	178.80	5,776.6	-35.7	155.6	0.08	0.05	5.19	-18.6	31.3	
5,971.0	0.60	181.70	5,965.6	-37.9	155.6	0.06	-0.05	1.53	-19.2	32.2	
6,161.0	0.90	72.90	6,155.6	-38.4	157.0	0.65	0.16	-57.26	-25.5	-29.5	
6,351.0	0.90	323.10	6,345.6	-36.8	157.5	0.78	0.00	-57.79	35.4	-15.4	
6,540.0	1.10	324.00	6,534.5	-34.1	155.6	0.11	0.11	0.48	31.8	-15.9	
6,729.0	1.40	318.00	6,723.5	-31.0	153.0	0.17	0.16	-3.17	29.2	-12.7	
6,919.0	1.10	312.80	6,913.4	-28.0	150.1	0.17	-0.16	-2.74	26.1	-10.2	
7,108.0	1.10	304.90	7,102.4	-25.7	147.3	0.08	0.00	-4.18	23.7	-6.8	
7,297.0	1.10	301.40	7,291.4	-23.7	144.2	0.04	0.00	-1.85	20.4	-5.4	
7,487.0	1.10	149.50	7,481.4	-24.4	143.6	1.12	0.00	-79.95	-15.7	13.5	
7,677.0	1.00	161.60	7,671.3	-27.5	145.0	0.13	-0.05	6.37	-15.9	16.9	
7,866.0	0.80	148.70	7,860.3	-30.2	146.3	0.15	-0.11	-6.83	-22.2	12.6	
8,055.0	1.20	172.50	8,049.3	-33.3	147.2	0.30	0.21	12.59	-18.4	21.0	
8,245.0	1.00	194.60	8,239.2	-36.9	147.0	0.24	-0.11	11.63	-12.7	27.1	
8,434.0	1.10	183.70	8,428.2	-40.3	146.5	0.12	0.05	-5.77	-21.0	23.9	
8,623.0	1.20	188.30	8,617.2	-44.0	146.1	0.07	0.05	2.43	-22.8	25.7	
8,812.0	0.90	50.60	8,806.2	-45.1	147.0	1.04	-0.16	-72.86	-0.4	-35.7	
9,002.0	0.70	57.50	8,996.1	-43.5	149.1	0.12	-0.11	3.63	-7.3	-35.2	
9,192.0	0.70	34.50	9,186.1	-41.9	150.7	0.15	0.00	-12.11	4.8	-35.7	
9,381.0	0.80	20.40	9,375.1	-39.7	151.8	0.11	0.05	-7.46	10.9	-33.8	
9,571.0	1.30	242.70	9,565.1	-39.5	150.4	1.04	0.26	-72.47	13.5	31.4	
9,760.0	0.40	219.00	9,754.1	-41.0	148.1	0.50	-0.48	-12.54	-2.9	33.3	
9,949.0	2.70	196.60	9,943.0	-45.7	146.4	1.24	1.22	-11.85	-20.4	29.5	



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Survey											
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10,137.0	0.60	266.20	10,130.9	-50.0	144.1	1.36	-1.12	37.02	18.0	33.6	
10,326.0	1.60	353.60	10,319.9	-47.5	142.9	0.89	0.53	46.24	31.7	-15.4	
10,515.0	1.10	320.40	10,508.8	-43.5	141.4	0.48	-0.26	-17.57	30.9	3.0	
10,704.0	1.80	353.50	10,697.8	-39.1	139.9	0.56	0.37	17.51	23.0	-13.4	
10,893.0	1.10	359.50	10,886.7	-34.4	139.6	0.38	-0.37	3.17	16.7	-15.4	
11,082.0	0.50	13.70	11,075.7	-31.7	139.7	0.33	-0.32	7.51	9.9	-18.6	
11,272.0	0.40	281.90	11,265.7	-30.8	139.3	0.34	-0.05	-48.32	17.7	9.6	
11,461.0	0.70	282.90	11,454.7	-30.4	137.5	0.16	0.16	0.53	16.0	9.3	
11,651.0	0.70	334.00	11,644.7	-29.1	135.9	0.32	0.00	26.89	15.4	-5.7	
11,678.0	0.30	291.60	11,671.7	-28.9	135.7	1.02	-1.48	-157.04	15.0	6.1	
11,875.0	2.30	190.70	11,868.6	-32.6	134.5	1.21	1.02	-51.22	-12.7	13.1	
11,970.0	8.20	186.00	11,963.2	-41.2	133.5	6.22	6.21	-4.95	-22.3	12.0	
12,017.0	15.00	184.50	12,009.2	-50.7	132.6	14.48	14.47	-3.19	-29.5	11.1	
12,065.0	21.50	183.20	12,054.8	-65.6	131.7	13.57	13.54	-2.71	-37.2	9.7	
12,112.0	27.40	186.10	12,097.5	-85.0	130.0	12.81	12.55	6.17	-44.2	10.5	
12,160.0	33.20	188.30	12,139.0	-109.0	126.9	12.30	12.08	4.58	-51.3	9.5	
12,207.0	37.90	187.60	12,177.2	-136.1	123.2	10.04	10.00	-1.49	-57.9	5.3	
12,255.0	41.20	184.60	12,214.2	-166.5	120.0	7.94	6.87	-6.25	-62.4	-0.8	
12,302.0	44.20	180.10	12,248.7	-198.3	118.7	9.10	6.38	-9.57	-63.7	-6.2	
12,350.0	47.00	178.10	12,282.3	-232.6	119.2	6.55	5.83	-4.17	-62.0	-7.3	
12,397.0	51.10	177.90	12,313.1	-268.0	120.5	8.73	8.72	-0.43	-58.0	-6.2	
12,422.1	54.73	178.23	12,328.3	-288.0	121.2	14.51	14.47	1.33	-55.4	-5.4	
HL Crossing 12422.1' MD; 12328.3' TVD; -288.0' 121.2' 54.73											
12,444.0	57.90	178.50	12,340.4	-306.3	121.7	14.51	14.47	1.22	-53.2	-4.8	
12,491.0	62.60	178.20	12,363.7	-347.0	122.9	10.02	10.00	-0.64	-47.9	-3.9	
12,539.0	65.30	177.70	12,384.8	-390.1	124.4	5.70	5.62	-1.04	-40.4	-2.6	
12,586.0	71.20	175.70	12,402.2	-433.7	126.9	13.16	12.55	-4.26	-31.6	-0.3	



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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)
12,634.0	78.50	176.80	12,414.7	-479.9	129.9	15.37	15.21	2.29	-23.1	2.7
12,729.0	93.20	181.50	12,421.6	-574.3	131.3	16.24	15.47	4.95	-17.2	3.4
12,770.0	94.00	181.40	12,419.0	-615.3	130.3	1.97	1.95	-0.24	-20.1	2.1
12,865.0	92.40	180.80	12,413.7	-710.1	128.5	1.80	-1.68	-0.63	-26.2	-0.4
12,960.0	91.30	180.40	12,410.7	-805.0	127.5	1.23	-1.16	-0.42	-30.1	-2.1
13,055.0	90.50	179.80	12,409.2	-900.0	127.3	1.05	-0.84	-0.63	-32.4	-2.9
13,150.0	89.80	179.80	12,408.9	-995.0	127.6	0.74	-0.74	0.00	-33.5	-3.3
13,245.0	88.30	180.00	12,410.5	-1,090.0	127.8	1.59	-1.58	0.21	-32.7	-3.8
13,339.0	85.50	180.00	12,415.6	-1,183.8	127.8	2.98	-2.98	0.00	-28.4	-4.4
13,434.0	86.00	179.30	12,422.6	-1,278.6	128.4	0.90	0.53	-0.74	-22.2	-4.5
13,529.0	86.90	178.60	12,428.5	-1,373.4	130.1	1.20	0.95	-0.74	-17.1	-3.5
13,624.0	87.20	178.50	12,433.4	-1,468.2	132.5	0.33	0.32	-0.11	-13.1	-1.7
13,719.0	88.00	181.10	12,437.4	-1,563.1	132.8	2.86	0.84	2.74	-9.9	-2.1
13,813.0	88.70	180.60	12,440.1	-1,657.1	131.4	0.92	0.74	-0.53	-8.0	-4.1
13,877.0	92.00	182.50	12,439.7	-1,721.0	129.7	5.95	5.16	2.97	-8.9	-6.3
13,908.0	92.70	183.00	12,438.4	-1,752.0	128.2	2.77	2.26	1.61	-10.5	-8.0
13,955.0	93.10	182.50	12,436.0	-1,798.9	126.0	1.36	0.85	-1.06	-13.2	-10.6
14,003.0	92.90	182.80	12,433.5	-1,846.8	123.8	0.75	-0.42	0.62	-16.2	-13.2
14,098.0	92.20	181.70	12,429.3	-1,941.6	120.0	1.37	-0.74	-1.16	-21.2	-17.5
14,193.0	89.90	179.30	12,427.5	-2,036.6	119.2	3.50	-2.42	-2.53	-23.7	-19.0
14,287.0	87.30	177.90	12,429.8	-2,130.5	121.5	3.14	-2.77	-1.49	-22.1	-17.4
14,382.0	87.70	175.90	12,434.0	-2,225.3	126.6	2.14	0.42	-2.11	-18.7	-12.9
14,477.0	91.30	177.40	12,434.8	-2,320.1	132.2	4.11	3.79	1.58	-18.5	-8.0
14,572.0	89.20	176.50	12,434.4	-2,414.9	137.2	2.40	-2.21	-0.95	-19.6	-3.6
14,667.0	90.90	178.80	12,434.3	-2,509.8	141.1	3.01	1.79	2.42	-20.4	-0.4
14,762.0	92.40	179.80	12,431.6	-2,604.8	142.3	1.90	1.58	1.05	-23.8	0.1
14,856.0	92.70	180.30	12,427.4	-2,698.7	142.2	0.62	0.32	0.53	-28.7	-0.6



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	14,952.0	91.20	182.60	12,424.1	-2,794.6	139.8	2.86	-1.56	2.40	-32.6	-3.7
	15,002.0	91.50	182.70	12,423.0	-2,844.5	137.5	0.63	0.60	0.20	-34.2	-6.3
	15,047.0	88.10	182.30	12,423.1	-2,889.5	135.5	7.61	-7.56	-0.89	-34.3	-8.6
	15,094.0	86.30	180.10	12,425.4	-2,936.4	134.5	6.04	-3.83	-4.68	-32.4	-9.9
	15,141.0	85.30	179.30	12,428.9	-2,983.3	134.8	2.72	-2.13	-1.70	-29.3	-10.0
	15,188.0	84.60	178.50	12,433.0	-3,030.1	135.7	2.26	-1.49	-1.70	-25.5	-9.5
	15,236.0	85.70	177.30	12,437.0	-3,077.9	137.4	3.38	2.29	-2.50	-21.7	-8.0
	15,283.0	88.20	177.90	12,439.5	-3,124.8	139.4	5.47	5.32	1.28	-19.6	-6.4
	15,331.0	90.50	178.60	12,440.1	-3,172.7	140.9	5.01	4.79	1.46	-19.4	-5.2
	15,361.0	91.70	179.10	12,439.5	-3,202.7	141.5	4.33	4.00	1.67	-20.2	-4.8
	15,427.0	92.50	179.40	12,437.1	-3,268.7	142.3	1.29	1.21	0.45	-23.1	-4.4
	15,474.0	91.10	179.20	12,435.6	-3,315.7	142.9	3.01	-2.98	-0.43	-24.9	-4.2
	15,522.0	89.40	178.80	12,435.4	-3,363.6	143.7	3.64	-3.54	-0.83	-25.5	-3.7
	15,569.0	86.60	178.60	12,437.1	-3,410.6	144.8	5.97	-5.96	-0.43	-24.1	-2.9
	15,616.0	85.50	179.40	12,440.3	-3,457.5	145.6	2.89	-2.34	1.70	-21.3	-2.4
	15,663.0	86.80	179.80	12,443.4	-3,504.4	145.9	2.89	2.77	0.85	-18.4	-2.4
	15,711.0	89.40	178.70	12,445.0	-3,552.3	146.6	5.88	5.42	-2.29	-17.2	-2.1
	15,743.0	90.60	178.50	12,445.0	-3,584.3	147.4	3.80	3.75	-0.62	-17.4	-1.6
	15,773.0	91.00	178.50	12,444.6	-3,614.3	148.1	1.33	1.33	0.00	-18.1	-1.0
	15,806.0	90.50	178.60	12,444.2	-3,647.3	149.0	1.55	-1.52	0.30	-18.7	-0.4
	15,830.0	88.40	178.40	12,444.4	-3,671.3	149.6	8.79	-8.75	-0.83	-18.7	0.1
	15,901.0	87.30	177.50	12,447.1	-3,742.2	152.1	2.00	-1.55	-1.27	-16.5	2.1
	15,996.0	92.00	177.80	12,447.7	-3,837.1	156.0	4.96	4.95	0.32	-16.6	5.4
	16,048.0	90.80	177.80	12,446.4	-3,889.0	158.0	2.31	-2.31	0.00	-18.1	7.0
	16,090.0	90.80	178.20	12,445.8	-3,931.0	159.5	0.95	0.00	0.95	-18.9	8.2
	16,137.0	92.50	178.30	12,444.4	-3,978.0	160.9	3.62	3.62	0.21	-20.6	9.3
	16,185.0	91.40	178.60	12,442.8	-4,025.9	162.2	2.38	-2.29	0.62	-22.5	10.2



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3465.0usft (HP 462)
Site:	Antietam 9 Fed Com	MD Reference:	KB= 25' @ 3465.0usft (HP 462)
Well:	#705H	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)
16,217.0	89.40	179.20	12,442.6	-4,057.9	162.8	6.53	-6.25	1.87	-22.9	10.6
16,249.0	87.60	178.70	12,443.4	-4,089.9	163.4	5.84	-5.62	-1.56	-22.2	11.0
16,280.0	87.00	178.50	12,444.9	-4,120.8	164.2	2.04	-1.94	-0.65	-20.9	11.5
16,327.0	83.80	178.50	12,448.7	-4,167.7	165.4	6.81	-6.81	0.00	-17.4	12.5
16,375.0	83.50	178.40	12,454.0	-4,215.4	166.7	0.66	-0.62	-0.21	-12.3	13.4
16,422.0	84.70	178.60	12,458.8	-4,262.1	167.9	2.59	2.55	0.43	-7.8	14.3
16,469.0	86.30	178.60	12,462.5	-4,308.9	169.1	3.40	3.40	0.00	-4.4	15.1
16,501.0	86.20	178.50	12,464.6	-4,340.8	169.9	0.44	-0.31	-0.31	-2.5	15.7
16,564.0	85.50	178.30	12,469.1	-4,403.7	171.6	1.16	-1.11	-0.32	1.7	17.0
16,595.0	88.60	179.60	12,470.7	-4,434.6	172.2	10.84	10.00	4.19	3.2	17.4
16,626.0	89.80	180.00	12,471.2	-4,465.6	172.3	4.08	3.87	1.29	3.5	17.3
16,658.0	88.40	178.50	12,471.7	-4,497.6	172.7	6.41	-4.37	-4.69	3.8	17.5
16,705.0	85.90	177.90	12,474.0	-4,544.5	174.2	5.47	-5.32	-1.28	5.8	18.7
16,753.0	87.20	179.90	12,476.9	-4,592.4	175.1	4.96	2.71	4.17	8.5	19.2
16,800.0	88.90	180.60	12,478.5	-4,639.4	174.8	4.09	3.62	1.91	9.8	18.6
16,848.0	91.10	182.50	12,478.5	-4,687.4	173.4	5.79	4.58	3.54	9.5	16.9
16,880.0	91.50	182.40	12,477.8	-4,719.3	172.1	1.29	1.25	-0.31	8.6	15.3
16,911.0	92.00	182.90	12,476.8	-4,750.3	170.6	2.28	1.61	1.61	7.5	13.7
16,942.0	92.40	183.40	12,475.6	-4,781.2	168.9	2.06	1.29	1.61	6.1	11.8
16,974.0	91.50	183.60	12,474.5	-4,813.1	167.0	2.88	-2.81	0.62	4.9	9.6
17,005.0	90.40	180.00	12,474.0	-4,844.1	166.0	12.14	-3.55	-11.61	4.2	8.4
17,037.0	90.50	179.70	12,473.8	-4,876.1	166.1	0.99	0.31	-0.94	3.8	8.3
17,084.0	92.20	180.00	12,472.7	-4,923.1	166.2	3.67	3.62	0.64	2.4	8.1
17,131.0	90.30	178.40	12,471.6	-4,970.0	167.7	8.66	-4.04	-7.66	1.1	9.2
17,178.0	89.90	174.10	12,471.6	-5,016.9	171.6	4.97	-0.85	-4.89	0.8	12.8
17,226.0	90.50	173.80	12,471.4	-5,064.6	176.7	1.40	1.25	-0.62	0.4	17.5
17,273.0	91.00	174.20	12,470.8	-5,111.3	181.6	1.36	1.06	0.85	-0.5	22.1



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3485.0usft (HP 462)
Site:	Antietam 9 Fed Com	MD Reference:	KB= 25' @ 3465.0usft (HP 462)
Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	NS (usft)	EW (usft)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
17,320.0	90.20	175.80	12,470.3	-5,158.2	185.7	3.81	-1.70	3.40	-1.3	25.9
17,415.0	91.80	178.40	12,468.6	-5,253.0	190.5	3.21	1.68	2.74	-3.4	30.0
17,510.0	92.40	179.30	12,465.1	-5,347.9	192.4	1.14	0.63	0.95	-7.4	31.3
17,605.0	91.40	179.40	12,462.0	-5,442.9	193.5	1.06	-1.05	0.11	-11.1	31.7
17,699.0	88.40	180.10	12,462.2	-5,536.9	193.9	3.28	-3.19	0.74	-11.5	31.4
17,794.0	90.10	180.70	12,463.4	-5,631.8	193.2	1.90	1.79	0.63	-10.7	30.1
17,889.0	89.40	179.40	12,463.8	-5,726.8	193.1	1.55	-0.74	-1.37	-10.6	29.4
17,984.0	90.00	179.10	12,464.3	-5,821.8	194.4	0.71	0.63	-0.32	-10.3	30.0
18,078.0	90.50	180.20	12,463.9	-5,915.8	194.9	1.29	0.53	1.17	-11.0	29.9
18,173.0	89.50	178.50	12,463.9	-6,010.8	196.0	2.08	-1.05	-1.79	-11.3	30.3
18,268.0	89.60	181.10	12,464.7	-6,105.8	196.3	2.74	0.11	2.74	-10.8	30.0
18,363.0	89.70	180.80	12,465.2	-6,200.8	194.8	0.33	0.11	-0.32	-10.5	27.8
18,458.0	91.20	180.60	12,464.5	-6,295.8	193.6	1.59	1.58	-0.21	-11.6	25.9
18,553.0	91.20	180.30	12,462.5	-6,390.7	192.9	0.32	0.00	-0.32	-13.8	24.5
18,648.0	89.30	178.00	12,462.1	-6,485.7	194.3	3.14	-2.00	-2.42	-14.5	25.3
18,743.0	88.70	177.10	12,463.7	-6,580.6	198.3	1.14	-0.63	-0.95	-13.2	28.7
18,837.0	91.30	179.20	12,463.7	-6,674.6	201.4	3.56	2.77	2.23	-13.4	31.1
18,932.0	91.10	179.90	12,461.8	-6,769.5	202.1	0.77	-0.21	0.74	-15.7	31.2
19,027.0	88.90	181.50	12,461.8	-6,864.5	201.0	2.86	-2.32	1.68	-15.9	29.4
19,122.0	90.60	182.80	12,462.2	-6,959.4	197.4	2.25	1.79	1.37	-15.8	25.1
19,216.0	88.50	180.40	12,462.9	-7,053.4	194.8	3.39	-2.23	-2.55	-15.4	21.9
19,311.0	85.10	176.10	12,468.2	-7,148.2	197.7	5.76	-3.58	-4.53	-10.4	24.1
19,405.0	87.00	176.40	12,474.7	-7,241.7	203.8	2.05	2.02	0.32	-4.2	29.6
19,500.0	90.00	180.20	12,477.2	-7,336.6	206.6	5.09	3.16	4.00	-1.9	31.7
19,556.0	90.10	180.20	12,477.1	-7,392.6	206.4	0.18	0.18	0.00	-2.1	31.2
19,595.0	90.70	180.80	12,476.9	-7,431.6	206.1	2.18	1.54	1.54	-2.5	30.6
19,690.0	90.80	180.30	12,475.6	-7,526.6	205.2	0.54	0.11	-0.53	-4.0	29.0



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3465.0usft (HP 462)
Site:	Antietam 9 Fed Corn	MD Reference:	KB= 25' @ 3465.0usft (HP 462)
Well:	#705H	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)	BuId (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
19,711.1	91.46	180.27	12,475.2	-7,547.7	205.0	3.13	3.13	-0.16	-4.5	28.7
HL Crossing 19711.1' MD; 12475.2' TVD; -7547.7; 205.0; 91.46										
19,754.0	92.80	180.20	12,473.6	-7,590.6	204.9	3.13	3.12	-0.16	-6.2	28.3
Last MWD Survey (MD = 19754.0)										
19,810.0	92.80	180.20	12,470.9	-7,646.5	204.7	0.00	0.00	0.00	-9.1	27.7
Projection to Bit (MD = 19810.0)										

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
12,422.1	12,328.3	-288.0	121.2	HL Crossing 12422.1' MD; 12328.3' TVD; -288.0; 121.2; 54.73
19,711.1	12,475.2	-7,547.7	205.0	HL Crossing 19711.1' MD; 12475.2' TVD; -7547.7; 205.0; 91.46
19,754.0	12,473.6	-7,590.6	204.9	Last MWD Survey (MD = 19754.0)
19,810.0	12,470.9	-7,646.5	204.7	Projection to Bit (MD = 19810.0)

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Antietam 9 Fed Com #705H

HP 462

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: #705H

KB= 25' @ 3465.0usft (HP 462) 3440.0
Northing 419935.00 Easting 774246.00 Latitude 32° 34' 50.700" N Longitude 103° 34' 50.700" W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSecl	Target
1	1240.0	0.79	54.53	1239.9	11.7	2.6	0.00	0.00	-11.7	
2	1300.0	0.79	54.53	1299.9	12.2	3.2	0.00	0.00	-12.1	
3	1416.7	2.00	159.60	1416.6	10.8	4.6	2.00	124.14	-10.7	
4	2216.7	2.00	159.60	2216.1	-15.4	14.3	0.00	0.00	15.7	
5	2407.2	4.00	89.60	2406.4	-18.5	22.1	2.00	-99.50	19.0	
6	3767.2	4.00	89.60	3763.1	-17.8	117.0	0.00	0.00	20.5	
7	3967.2	0.00	0.00	3962.9	-17.7	124.0	2.00	180.00	20.6	
8	11964.9	0.00	0.00	11960.6	-17.7	124.0	0.00	0.00	20.6	
9	12710.8	89.51	179.60	12438.0	-491.1	127.3	12.00	179.60	493.9	
10	14217.8	89.51	179.60	12451.0	-1998.0	138.0	0.00	0.00	2000.7	TGT 1 (Antietam 9 Fed Com #705H)
11	14221.8	89.59	179.60	12451.0	-2002.0	138.0	2.00	6.49	2004.6	
12	16017.9	89.59	179.60	12464.0	-3798.0	150.4	0.00	0.00	3800.5	TGT 2 (Antietam 9 Fed Com #705H)
13	16022.7	89.68	179.60	12464.0	-3802.8	150.4	2.00	-0.01	3805.2	
14	17818.0	89.68	179.60	12474.0	-5598.0	162.8	0.00	0.00	5600.3	TGT 3 (Antietam 9 Fed Com #705H)
15	17825.5	89.83	179.60	12474.0	-5605.5	162.9	2.00	0.00	5607.8	
16	19868.0	89.83	179.60	12480.0	-7648.0	177.0	0.00	0.00	7650.0	PBHL (Antietam 9 Fed Com #705H)

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 #705H)	12451.0	-1998.0	138.0	417537.00	774583.97
TGT 2 (Antietam 9 Fed Com #705H)	12464.0	-3798.0	150.4	416137.00	774396.41
TGT 3 (Antietam 9 Fed Com #705H)	12474.0	-5598.0	162.8	414337.00	774408.84
PBHL (Antietam 9 Fed Com #705H)	12480.0	-7648.0	177.0	412287.00	774423.00
FTP (Antietam 9 Fed Com #705H)	12438.0	-288.0	126.0	419647.00	774372.00
KOP (Antietam 9 Fed Com #705H)	11960.6	0.0	124.2	419935.00	774370.17

