



HOBBS OCD
FEB 27 2020
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Wild Weasel 22 Fed Com

#709H

OH

Design: OH

Midland PVA

01 December, 2019



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Wild Weasel 22 Fed Corn
 Well: #709H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #709H
 TVD Reference: KB = 25 @ 3379.0usft
 MD Reference: KB = 25 @ 3379.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM

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	Wild Weasel 22 Fed Corn		
Site Position:		Northing:	409,434.00 usft
From: Map		Easting:	814,510.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 21.137 N
		Longitude:	103° 27' 3.375 W
		Grid Convergence:	0.47 "

Well	#709H		
Well Position	+N-S 0.0 usft	Northing:	409,233.00 usft
	+E-W 0.0 usft	Easting:	812,265.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 7' 19.330 N
		Longitude:	103° 27' 29.498 W
		Ground Level:	3,354.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	11/28/2019	8.51
			Dip Angle (°)
			60.32
			Field Strength (nT)
			49,444.64029433

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)
	0.0	0.0	0.0
		Direction (°)	184.16

Survey Program	Data 12/1/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
156.0	22,848.0	HTMWD (OH)	MWD
			Description
			OWSG MWD - Standard



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLag (°/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
156.0	0.92	271.41	156.0	0.0	-1.3	0.59	0.59	0.00	-1.3	0.0
333.0	1.32	256.03	333.0	-0.4	-4.7	0.28	0.23	-8.69	-4.6	-0.7
512.0	1.32	248.65	511.9	-1.7	-8.6	0.09	0.00	-4.12	-8.6	-1.6
696.0	1.14	225.80	695.9	-3.7	-11.9	0.28	-0.10	-12.42	-11.1	-5.6
883.0	1.32	207.25	882.8	-8.9	-14.2	0.23	0.10	-9.92	-12.7	-9.4
966.0	1.27	208.31	965.8	-8.6	-15.1	0.07	-0.08	1.28	-14.7	-9.2
1,147.0	1.63	189.94	1,146.7	-12.9	-16.4	0.32	0.20	-10.15	-15.6	-13.6
1,333.0	2.55	330.92	1,332.7	-11.9	-18.9	2.12	0.49	75.80	8.9	16.8
1,519.0	5.93	318.94	1,518.2	-1.2	-27.5	1.89	1.82	-7.52	10.3	9.9
1,708.0	7.43	314.57	1,703.9	14.3	-42.7	0.82	0.80	-1.27	11.3	2.0
1,892.0	9.93	298.81	1,887.8	30.0	-65.6	1.96	1.34	-9.55	6.9	1.1
2,080.0	9.80	297.34	2,073.0	44.6	-94.3	0.08	-0.07	0.28	-0.9	0.4
2,267.0	10.02	298.55	2,257.2	59.2	-123.0	0.14	0.12	-0.42	-8.7	-0.3
2,454.0	10.20	298.31	2,441.3	74.3	-152.1	0.19	0.10	0.94	-17.3	-0.7
2,641.0	8.70	295.23	2,625.8	88.2	-179.5	0.85	-0.80	-1.65	-23.5	-2.3
2,828.0	8.62	296.99	2,810.6	100.6	-204.7	0.15	-0.04	0.94	-27.4	-1.8
3,016.0	8.62	302.09	2,998.5	114.5	-229.2	0.41	0.00	2.71	-31.2	-0.9
3,203.0	6.64	312.72	3,181.9	129.3	-249.1	1.30	-1.06	5.68	-32.1	0.2
3,390.0	6.24	318.00	3,367.7	144.2	-263.8	0.38	-0.21	2.82	-30.2	-5.2
3,576.0	7.43	289.70	3,552.4	155.7	-281.9	1.90	0.64	-15.22	-21.0	-21.2
3,763.0	5.89	291.80	3,738.1	163.4	-302.2	0.83	-0.82	1.12	-19.0	-18.4
3,950.0	7.78	281.35	3,923.8	169.4	-323.5	1.21	1.01	-5.59	-13.8	-17.2
4,137.0	4.18	292.60	4,109.6	174.5	-342.2	2.02	-1.93	6.02	-11.7	-10.5
4,324.0	5.67	283.19	4,298.1	179.3	-357.5	0.90	0.80	-5.03	-1.8	-8.2
4,511.0	7.82	272.47	4,481.8	181.9	-379.2	1.33	1.15	-5.73	0.3	-0.5
4,698.0	5.71	269.13	4,687.5	182.3	-401.2	1.15	-1.13	-1.79	0.3	9.6



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Well:	#709H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

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)	
4,985.0	6.73	285.83	4,853.4	185.2	-421.1	1.10	0.55	8.83	7.2	15.9	
5,072.0	6.11	315.27	5,039.2	195.2	-438.6	1.77	-0.33	15.74	17.6	7.5	
5,258.0	7.87	309.82	5,224.9	210.5	-455.5	1.00	0.94	-2.91	17.8	2.2	
5,445.0	8.70	304.99	5,408.9	226.7	-478.8	0.58	0.45	-2.60	14.7	-1.4	
5,631.0	8.40	301.74	5,592.8	241.9	-499.8	0.31	-0.16	-1.75	11.3	-4.0	
5,817.0	8.62	300.77	5,776.8	256.2	-523.4	0.14	0.12	-0.52	8.0	-6.2	
6,003.0	8.68	299.54	5,960.7	270.3	-547.5	0.10	0.02	-0.66	4.4	-8.1	
6,190.0	8.75	297.78	6,145.5	283.8	-572.4	0.15	0.05	-0.94	0.7	-9.3	
6,377.0	7.30	298.99	6,330.7	295.8	-595.5	0.78	-0.78	-0.42	-0.9	-10.1	
6,564.0	7.30	294.53	6,516.2	306.2	-616.9	0.17	0.00	-1.32	0.2	-10.2	
6,751.0	6.99	293.30	6,701.7	315.8	-638.2	0.18	-0.17	-0.66	1.6	-9.5	
6,937.0	7.25	289.98	6,886.3	324.1	-659.8	0.26	0.14	-1.80	3.3	-7.7	
7,124.0	8.40	291.01	7,071.6	333.0	-683.5	0.82	0.61	0.56	2.0	-5.8	
7,312.0	8.68	292.33	7,257.5	343.3	-709.4	0.17	0.14	0.70	-1.5	-4.0	
7,500.0	8.35	293.83	7,443.4	354.2	-734.9	0.20	-0.16	0.80	-4.9	-2.8	
7,687.0	7.43	292.68	7,628.6	364.4	-758.5	0.50	-0.49	-0.61	-6.2	-2.0	
7,874.0	5.58	289.52	7,814.4	372.1	-778.2	1.01	-0.99	-1.69	-2.9	-0.4	
8,061.0	3.43	303.23	8,000.8	378.2	-791.5	1.28	-1.15	7.33	6.7	-0.8	
8,247.0	2.24	303.41	8,186.6	383.2	-799.2	0.84	-0.84	0.10	13.8	-3.0	
8,402.8	1.10	310.34	8,342.4	385.9	-802.9	0.74	-0.73	4.45	12.7	-5.3	
Brushy Top (WW 22 FC #709H)											
8,434.0	0.88	313.87	8,373.5	388.2	-803.3	0.74	-0.71	11.31	11.8	-6.1	
8,621.0	0.79	297.69	8,560.5	387.8	-805.4	0.13	-0.05	-8.65	10.4	-3.0	
8,808.0	0.53	225.10	8,747.5	387.8	-807.2	0.43	-0.14	-38.82	4.7	7.8	
8,995.0	0.35	205.50	8,934.5	388.7	-808.1	0.12	-0.10	-10.48	0.4	8.6	
9,181.0	0.62	222.90	9,120.5	385.4	-809.0	0.16	0.15	9.35	1.4	8.2	
9,369.0	0.44	194.33	9,308.5	384.0	-809.9	0.17	-0.10	-15.20	-4.3	7.4	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

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)	
9,556.0	0.97	178.95	9,495.5	381.7	-810.0	0.30	0.28	-8.22	-8.4	5.8	
9,743.0	0.35	127.80	9,682.5	379.8	-809.5	0.43	-0.33	-27.35	-11.4	-4.1	
9,929.0	0.35	114.97	9,868.5	379.2	-808.6	0.04	0.00	-6.80	-11.3	-6.7	
10,116.0	1.38	137.64	10,055.4	377.3	-808.6	0.56	0.54	12.12	-15.7	-1.6	
10,303.0	2.24	247.24	10,242.4	374.2	-808.4	1.60	0.47	58.61	0.9	17.5	
10,491.0	1.32	189.24	10,430.3	370.7	-812.2	1.01	-0.49	-30.85	-18.4	6.9	
10,678.0	2.81	168.65	10,617.2	364.1	-811.5	0.89	0.80	-12.08	-26.2	-1.6	
10,865.0	2.20	179.39	10,804.0	358.1	-810.4	0.44	-0.33	6.81	-34.0	5.3	
11,052.0	2.07	173.24	10,990.9	349.1	-809.9	0.14	-0.07	-3.29	-41.3	1.2	
11,240.0	2.15	171.83	11,178.7	342.2	-809.0	0.05	0.04	-0.75	-48.3	0.1	
11,298.2	2.31	175.18	11,236.9	340.0	-808.8	0.35	0.27	5.76	-50.4	3.0	
FTP Crossing, MD:11298.2, TVD:11236.9, N/S:340.0, E/W:-808.8, INC:2.31											
11,427.0	2.68	181.14	11,365.6	334.4	-808.6	0.35	0.29	4.63	-55.4	8.5	
11,614.0	1.14	230.46	11,552.5	328.8	-810.1	1.13	-0.82	26.37	-34.4	50.8	
11,801.0	1.85	300.42	11,739.4	329.2	-814.2	0.97	0.38	37.41	32.4	51.5	
11,921.0	2.02	317.82	11,859.4	331.7	-817.3	0.51	0.14	14.50	42.3	40.1	
12,112.0	1.78	324.15	12,050.2	338.6	-821.2	0.17	-0.14	3.31	40.2	35.5	
12,200.0	2.70	315.81	12,138.2	339.2	-823.5	1.13	1.07	-9.48	31.2	40.8	
KOP, MD:12200.0, TVD:12138.2, N/S:339.2, E/W:-823.5, INC:2.70											
12,208.0	2.77	315.45	12,144.2	339.4	-823.7	1.13	1.10	-6.00	30.7	41.0	
12,299.0	12.09	181.43	12,236.5	331.4	-827.2	14.87	10.02	-133.35	-55.3	-0.4	
12,393.0	32.48	175.79	12,323.1	288.2	-827.3	22.41	21.69	-16.64	-65.4	-16.4	
12,488.0	40.09	174.82	12,398.0	241.4	-822.8	8.21	8.18	-1.04	-79.6	-13.5	
12,580.0	38.77	176.93	12,470.6	181.9	-818.4	2.00	-1.40	2.24	-77.7	-8.7	
12,599.7	41.12	178.14	12,485.8	169.2	-817.9	12.56	11.93	6.14	-74.7	-5.0	
FTP (NW 22 FC #709H)											
12,674.0	50.07	181.85	12,537.7	116.2	-818.0	12.56	12.05	4.99	-62.0	-3.2	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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12,767.0	81.01	189.06	12,590.3	40.1	-825.6	13.38	11.76	7.75	-44.1	-10.4
12,861.0	68.40	187.21	12,630.4	-44.0	-837.6	8.06	7.86	-1.97	-21.0	-24.9
12,955.0	73.80	178.16	12,660.9	-132.7	-841.6	10.76	5.74	-9.63	7.4	-30.1
13,048.0	88.66	174.03	12,675.1	-224.1	-835.3	16.57	15.98	-4.44	20.9	-24.4
13,142.0	87.87	182.03	12,677.9	-317.9	-832.1	8.55	-0.84	8.51	22.8	-22.1
13,236.0	89.76	183.87	12,679.8	-411.8	-838.9	2.81	2.01	1.98	23.9	-27.7
13,329.0	85.38	177.72	12,683.8	-604.6	-838.2	8.12	-4.73	-6.61	27.0	-29.8
13,423.0	89.23	179.57	12,688.2	-698.4	-836.0	4.56	4.12	1.97	30.8	-28.4
13,516.0	90.51	175.09	12,688.5	-691.3	-831.7	5.01	1.38	-4.82	30.0	-24.8
13,611.0	88.13	172.80	12,689.6	-785.8	-821.7	3.48	-2.51	-2.41	30.3	-15.5
13,705.0	89.23	177.02	12,691.8	-879.3	-813.3	4.64	1.17	4.49	31.6	-8.1
13,799.0	89.49	178.34	12,692.8	-973.3	-809.5	1.43	0.28	1.40	31.8	-5.1
13,893.0	91.08	180.71	12,692.3	-1,067.2	-808.8	3.04	1.69	2.52	30.4	-5.1
13,986.0	88.35	179.83	12,692.8	-1,160.2	-809.2	3.08	-2.94	-0.85	30.1	-6.3
14,080.0	86.62	176.14	12,695.3	-1,254.1	-805.9	3.83	0.29	-3.93	31.7	-3.8
14,174.0	90.37	174.03	12,696.1	-1,347.8	-797.8	2.92	1.86	-2.24	31.7	3.5
14,267.0	86.77	172.01	12,698.4	-1,440.0	-786.5	4.44	-3.87	-2.17	33.2	14.0
14,360.0	88.28	173.68	12,702.5	-1,532.2	-775.0	2.41	1.80	1.80	36.4	24.7
14,453.0	89.71	173.86	12,704.1	-1,624.6	-764.9	1.57	1.56	0.19	37.2	34.0
14,547.0	92.35	178.16	12,702.4	-1,718.4	-758.3	5.37	2.81	4.57	34.6	39.8
14,641.0	89.01	177.20	12,701.3	-1,812.3	-754.5	3.70	-3.55	-1.02	32.6	42.8
14,734.0	89.85	182.73	12,702.2	-1,905.2	-754.5	6.01	0.90	6.95	32.8	42.1
14,828.0	90.55	183.26	12,701.9	-1,999.1	-759.4	0.83	0.74	0.56	31.6	36.4
14,922.0	88.40	182.91	12,702.8	-2,093.0	-764.4	2.32	-2.29	-0.37	31.6	30.5
15,016.0	93.27	182.64	12,701.4	-2,186.8	-769.0	5.19	5.18	-0.29	29.3	25.2
15,109.0	90.11	180.97	12,698.7	-2,279.7	-771.9	3.84	-3.40	-1.80	25.7	21.5
15,204.0	86.64	181.59	12,701.3	-2,374.6	-774.0	3.71	-3.65	0.65	27.6	18.5



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15,297.0	90.68	181.77	12,703.5	-2,487.5	-776.8	4.35	4.34	0.19	28.9	15.0	
15,391.0	92.35	179.22	12,701.0	-2,561.5	-777.6	3.24	1.78	-2.71	25.5	13.5	
15,485.0	94.07	175.00	12,695.8	-2,655.2	-772.9	4.84	1.83	-4.49	19.5	17.3	
15,577.0	93.49	176.32	12,689.7	-2,746.7	-765.9	1.56	-0.63	1.43	12.6	23.5	
15,671.0	89.49	174.03	12,687.3	-2,840.4	-758.0	4.90	-4.26	-2.44	9.3	30.7	
15,765.0	86.33	175.53	12,690.7	-2,933.9	-749.5	3.72	-3.36	1.80	11.7	38.5	
15,857.0	88.59	176.05	12,696.4	-3,025.5	-742.7	0.63	0.28	0.57	16.5	44.4	
15,949.0	88.59	177.81	12,701.8	-3,117.2	-737.8	1.81	0.00	1.91	21.2	48.6	
16,042.0	89.54	179.74	12,705.0	-3,210.1	-735.8	3.79	3.17	2.08	23.6	49.7	
16,135.0	90.20	180.97	12,705.2	-3,303.1	-736.4	1.50	0.71	1.32	23.0	48.4	
16,228.0	90.95	180.54	12,704.3	-3,396.1	-737.6	0.93	0.81	-0.46	21.2	46.4	
16,321.0	90.24	179.57	12,703.3	-3,489.1	-737.7	1.29	-0.78	-1.04	19.4	45.5	
16,415.0	90.07	181.15	12,703.0	-3,583.0	-738.3	1.69	-0.18	1.68	18.3	44.1	
16,540.0	90.51	183.00	12,702.4	-3,708.0	-742.8	1.52	0.35	1.48	16.5	38.5	
16,632.0	90.29	181.85	12,701.8	-3,799.9	-746.7	1.27	-0.24	-1.25	15.0	33.8	
16,726.0	87.60	175.70	12,703.5	-3,893.8	-744.7	7.14	-2.86	-6.54	15.8	35.1	
16,819.0	89.54	177.46	12,705.8	-3,986.6	-739.2	2.82	2.09	1.89	17.4	39.8	
16,913.0	88.66	176.49	12,707.3	-4,080.4	-734.2	1.39	-0.94	-1.03	18.0	44.0	
17,007.0	91.30	181.24	12,707.3	-4,174.4	-732.3	5.78	2.81	5.05	17.2	45.0	
17,101.0	95.30	178.51	12,701.9	-4,268.2	-732.1	5.15	4.28	-2.90	10.9	44.4	
17,194.0	90.37	182.73	12,697.3	-4,361.0	-733.2	6.97	-5.30	4.54	5.5	42.6	
17,287.0	89.27	182.73	12,697.6	-4,453.9	-737.8	1.18	-1.18	0.00	5.0	37.4	
17,381.0	89.23	182.38	12,698.8	-4,547.8	-741.8	0.37	-0.04	-0.37	5.3	32.4	
17,475.0	90.68	181.77	12,698.9	-4,641.8	-745.2	1.67	1.54	-0.65	4.5	28.2	
17,568.0	90.20	181.50	12,698.2	-4,734.7	-747.8	0.59	-0.52	-0.29	3.0	24.8	
17,662.0	91.52	183.17	12,698.6	-4,828.6	-751.7	2.26	1.40	1.78	0.7	20.2	
17,756.0	89.05	182.20	12,698.3	-4,922.5	-756.1	2.82	-2.63	-1.03	-0.6	15.0	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #709H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3378.0usft
Site:	Wild Weasel 22 Fed Corn	MD Reference:	KB = 25 @ 3378.0usft
Well:	#709H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

Survey											
MD (usft)	Ino (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
17,850.0	88.88	182.12	12,698.0	-5,016.4	-759.6	0.20	-0.18	-0.09	0.2	10.6	
17,943.0	92.48	183.17	12,696.9	-5,109.3	-763.9	4.03	3.87	1.13	-1.7	5.6	
18,036.0	89.32	181.50	12,695.5	-5,202.2	-767.7	3.84	-3.40	-1.80	-4.0	1.0	
18,130.0	89.85	182.73	12,696.1	-5,286.1	-771.1	1.42	0.56	1.31	-4.2	-3.3	
18,223.0	91.30	182.12	12,695.2	-5,389.0	-775.1	1.69	1.56	-0.68	-6.0	-8.0	
18,317.0	92.40	183.44	12,692.2	-5,482.9	-779.6	1.83	1.17	1.40	-9.9	-13.3	
18,410.0	91.98	180.80	12,688.6	-5,575.7	-783.1	2.88	-0.47	-2.64	-14.2	-17.6	
18,504.0	90.90	180.10	12,686.3	-5,669.7	-783.8	1.35	-1.13	-0.74	-17.5	-19.1	
18,597.0	88.81	177.28	12,688.1	-5,762.6	-781.7	5.34	-4.40	-3.03	-16.4	-17.8	
18,690.0	87.34	177.20	12,692.9	-5,855.4	-777.2	0.58	0.57	-0.09	-12.5	-14.1	
18,784.0	87.87	176.67	12,696.8	-5,949.2	-772.2	0.80	0.56	-0.56	-8.5	-8.8	
18,878.0	89.54	178.51	12,698.9	-6,043.1	-768.2	2.84	1.78	1.98	-8.2	-6.7	
18,972.0	89.23	178.07	12,699.9	-6,137.0	-765.4	0.57	-0.33	-0.47	-8.0	-4.7	
19,065.0	90.85	179.39	12,699.8	-6,230.0	-763.4	2.33	1.85	1.42	-9.0	-3.4	
19,083.3	90.88	179.01	12,699.5	-6,248.3	-763.1	2.09	-0.38	-2.05	-8.5	-3.3	
TGT#1(NW 22 FC #709H)											
19,159.0	90.59	177.46	12,698.5	-6,323.9	-760.8	2.09	-0.38	-2.05	-11.0	-1.6	
19,252.0	90.07	178.43	12,698.0	-6,416.9	-757.5	1.18	-0.56	1.04	-12.2	0.9	
19,346.0	88.40	178.51	12,699.3	-6,510.8	-755.0	1.78	-1.78	0.09	-11.6	2.6	
19,440.0	88.57	179.57	12,701.7	-6,604.8	-753.4	1.14	0.18	1.13	-9.7	3.4	
19,534.0	88.18	178.04	12,704.4	-6,698.7	-752.2	0.70	-0.41	-0.56	-7.7	3.8	
19,627.0	88.88	178.25	12,708.8	-6,781.7	-750.0	1.13	0.75	-0.85	-6.0	5.2	
19,721.0	88.97	178.66	12,708.6	-6,865.6	-748.3	1.50	0.10	1.50	-4.9	6.1	
19,814.0	91.25	187.21	12,708.4	-6,978.4	-753.9	8.48	2.45	8.12	-5.7	-0.2	
19,908.0	90.73	181.77	12,706.8	-7,072.1	-761.2	5.81	-0.55	-5.79	-7.9	-8.4	
20,002.0	89.80	177.90	12,706.3	-7,166.0	-761.0	4.23	-0.99	-4.12	-9.0	-8.9	
20,094.0	88.18	173.86	12,707.9	-7,257.8	-754.4	4.73	-1.76	-4.39	-8.0	-3.1	



Midland PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Wild Weasel 22 Fed Com
Well: #709H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25 @ 3379.0usft
MD Reference: KB = 25 @ 3379.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM

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)	
20,188.0	89.19	173.33	12,710.1	-7,351.2	-743.9	1.21	1.07	-0.56	-6.6	6.6	
20,282.0	85.19	176.56	12,714.7	-7,444.7	-735.6	5.48	-4.26	3.46	-2.6	14.1	
20,375.0	88.70	174.73	12,719.7	-7,537.2	-728.6	4.26	3.77	-1.99	1.7	20.3	
20,469.0	89.36	176.05	12,721.3	-7,630.9	-721.0	1.57	0.70	1.40	2.7	27.1	
20,562.0	91.25	176.69	12,720.8	-7,723.8	-716.8	3.49	2.03	2.84	1.6	30.6	
20,656.0	91.38	178.95	12,718.6	-7,817.8	-714.8	0.31	0.14	0.28	-1.2	31.7	
20,750.0	89.85	178.95	12,717.6	-7,911.7	-713.1	1.63	-1.63	0.00	-2.9	32.6	
20,843.0	89.10	178.95	12,718.4	-8,004.7	-711.4	0.81	-0.81	0.00	-2.7	33.6	
20,938.0	90.29	179.48	12,719.0	-8,099.7	-710.1	1.37	1.25	0.56	-2.9	34.0	
21,031.0	90.20	179.48	12,718.6	-8,192.7	-709.3	0.10	-0.10	0.00	-3.9	34.1	
21,124.0	88.31	180.27	12,719.8	-8,285.7	-709.1	2.20	-2.03	0.85	-3.3	33.5	
21,218.0	89.01	180.80	12,721.9	-8,377.7	-709.9	0.95	0.76	0.58	-1.8	31.9	
21,310.0	87.69	180.62	12,724.6	-8,471.6	-711.1	1.42	-1.40	-0.19	0.3	29.9	
21,404.0	89.19	181.15	12,727.2	-8,565.6	-712.5	1.69	1.60	0.56	2.2	27.7	
21,497.0	90.59	182.47	12,727.4	-8,658.5	-715.5	2.07	1.51	1.42	1.7	24.0	
21,591.0	90.68	182.20	12,726.3	-8,752.4	-719.3	0.30	0.10	-0.29	0.0	19.3	
21,685.0	88.88	181.77	12,726.7	-8,846.4	-722.6	1.97	-1.91	-0.46	-0.3	15.3	
21,778.0	89.41	181.41	12,728.1	-8,939.3	-725.1	0.89	0.57	-0.39	0.5	11.9	
21,872.0	91.16	182.03	12,727.6	-9,033.3	-728.0	1.98	1.86	0.66	-0.7	8.3	
21,965.0	89.49	180.36	12,727.1	-9,126.2	-729.9	2.54	-1.80	-1.80	-1.8	5.6	
22,058.0	89.14	177.81	12,728.2	-9,219.2	-728.4	2.77	-0.38	-2.74	-1.4	6.3	
22,151.0	89.01	178.16	12,729.7	-9,312.1	-725.1	0.40	-0.14	0.38	-0.5	8.8	
22,245.0	89.45	177.55	12,730.9	-9,406.1	-721.6	0.80	0.47	-0.65	0.1	11.5	
22,338.0	92.26	178.69	12,729.6	-9,499.0	-718.6	3.26	3.02	1.23	-1.9	13.7	
22,432.0	93.63	179.66	12,724.7	-9,592.9	-717.2	1.78	1.46	1.03	-7.4	14.3	
22,526.0	90.73	178.25	12,721.2	-9,686.8	-715.5	3.43	-3.09	-1.50	-11.6	15.2	
22,620.0	89.19	179.74	12,721.2	-9,780.7	-713.9	2.28	-1.84	1.59	-12.2	16.1	



Midland PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Wild Weasel 22 Fed Corn
Well: #709H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25 @ 3378.0usft
MD Reference: KB = 25 @ 3378.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D/Leg (°/100usft)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
22,713.0	84.66	177.11	12,726.2	-9,873.5	-711.3	5.63	-4.87	-2.83	-7.9	17.8	
22,798.0	87.03	178.25	12,732.4	-9,858.2	-707.9	3.09	2.79	1.34	-2.3	20.5	
Last MWD Survey (MD=22798.0')											
22,848.0	87.03	178.25	12,735.0	-10,008.2	-708.4	0.00	0.00	0.00	-0.1	21.6	
Projection to Bit (MD=22848.0') - PBHL (WW 22 FC #709H)											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,298.2	11,238.8	340.0	-808.8	FTP Crossing, MD:11298.2', TVD:11238.8', N/S:340.0', E/W:-808.8', INC:2.31
12,200.0	12,138.2	339.2	-823.5	KOP, MD:12200.0', TVD:12138.2', N/S:339.2', E/W:-823.5', INC:2.70
22,798.0	12,732.4	-9,858.2	-707.9	Last MWD Survey (MD=22798.0')
22,848.0	12,735.0	-10,008.2	-708.4	Projection to Bit (MD=22848.0')

Checked By: _____ Approved By: _____ Date: _____

I certify this survey to be true and correct to the best of my belief and knowledge.

Kay Maddox 2/25/2020
Signed Date



Lea County, NM (NAD 83 NME)

Wild Weasel 22 Fed Com #709H

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: #709H

KB = 25 @ 3379.0ust
Northing 409233.00 Easting 812263.00
Latitude 32° 7' 19.330 N Longitude 103° 27' 29.498 W



Acknowledge to Grid North
True North: 0.47°
Magnetic North: 0.99°

Magnetic Field
Strength: 48.444 Gauss
Dip Angle: 68.22°
Date: 10/28/2014
Model: 709H2014

To convert a Magnetic Direction to a Grid Direction, Add 0.99°
To convert a Magnetic Direction to a True Direction, Add 0.51° East
To convert a True Direction to a Grid Direction, Subtract 0.47°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeal	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1100.0	0.00	0.00	1100.0	0.0	0.0	0.00	0.00	0.0	
3	1475.2	7.50	295.55	1474.1	10.6	-22.1	2.00	295.55	-8.9	
4	8025.0	7.50	295.55	7987.9	379.4	-793.9	0.00	0.00	-320.8	
5	8400.2	0.00	0.00	8342.0	390.0	-816.0	2.00	180.00	-329.8	Brushy Top (WW 22 FC #709H)
6	12233.7	0.00	0.00	12175.5	390.0	-816.0	0.00	0.00	-329.8	
7	12979.4	89.48	179.52	12852.9	-83.1	-812.0	12.00	179.52	141.8	
8	19145.1	89.48	179.52	12709.0	-8248.3	-759.8	0.00	0.00	6287.0	TGT#1(WW 22 FC #709H)
9	19151.3	89.60	179.52	12709.0	-8254.5	-759.8	2.00	0.00	6293.2	
10	22906.0	89.60	179.52	12735.0	-10009.0	-728.0	0.00	0.00	10035.4	PBHL (WW 22 FC #709H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
Brushy Top (WW 22 FC #709H)	8342.0	390.0	-816.0	409623.00	811443.00
FTP (WW 22 FC #709H)	12853.0	340.0	-816.0	409673.00	811443.00
TGT#1 (WW 22 FC #709H)	12709.0	-4248.3	-759.8	409594.70	811505.18
PBHL (WW 22 FC #709H)	12735.0	-10009.0	-728.0	398224.00	811537.00

