



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Dillon 31 Fed Com

#702H

OH

Design: OH

Midland PVA

02 July, 2019

HOBBS OCD
SEP 20 2019
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Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Dillon 31 Fed Com
 Well: #702H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #702H
 TVD Reference: KB = 25' @ 3461.0usft
 MD Reference: KB = 25' @ 3461.0usft
 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 Dillon 31 Fed Com

Site Position:	Map	Northing:	425,686.00 usft	Latitude:	32° 10' 3.262 N
From:		Easting:	797,851.00 usft	Longitude:	103° 30' 15.624 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 "

Well #702H

Well Position	+N-S	0.0 usft	Northing:	425,686.00 usft	Latitude:	32° 10' 3.260 N
	+E-W	0.0 usft	Easting:	797,854.00 usft	Longitude:	103° 30' 15.240 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level:	3,436.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/14/2018	8.76	60.00	47,766.51878882

Design OH

Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	
Vertical Section:		Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
		0.0	0.0	0.0	358.34

Survey Program Date 7/2/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
120.0	19,891.0	Total MWD #1 (OH)	MWD	OWSG MWD - Standard



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0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
161.0	0.90	142.80	161.0	-0.3	0.2	2.20	2.20	0.00	-0.3	0.0
310.0	2.40	100.70	309.9	-1.8	4.0	1.23	1.01	-28.28	-4.2	-1.0
399.0	3.80	70.90	398.8	-1.1	8.6	2.35	1.57	-33.48	-7.7	-3.9
486.0	5.20	62.40	485.5	1.6	14.8	1.78	1.61	-9.77	-13.9	-5.4
575.0	3.60	72.10	574.3	4.3	21.0	1.98	-1.80	10.90	-21.4	-2.3
673.0	1.10	165.80	672.2	4.4	24.2	3.91	-2.55	95.61	-1.7	24.5
766.0	0.80	274.80	765.2	3.6	23.8	1.67	-0.32	117.20	23.4	-5.5
860.0	2.20	318.40	859.2	5.0	21.9	1.82	1.49	46.38	10.8	-19.7
953.0	3.70	15.50	952.1	9.2	21.5	3.35	1.61	61.40	-14.6	-18.3
1,047.0	5.20	60.70	1,045.8	14.2	26.1	3.92	1.60	48.09	-29.7	-0.4
1,139.0	3.00	90.00	1,137.6	16.3	32.1	3.23	-2.39	31.85	-32.1	16.3
1,232.0	2.20	211.30	1,230.5	14.7	33.6	4.89	-0.86	130.43	30.0	21.1
1,293.0	3.30	227.20	1,291.4	12.5	31.7	2.18	1.80	26.07	31.8	12.4
1,335.0	3.13	226.63	1,333.4	10.9	30.0	0.41	-0.40	-1.36	29.5	12.7
1,419.0	2.80	225.30	1,417.3	7.9	26.9	0.40	-0.39	-1.58	27.0	13.7
1,512.0	4.50	47.90	1,510.2	8.8	28.0	7.85	1.83	-190.75	-34.1	-13.3
1,606.0	5.50	45.80	1,603.6	14.4	33.9	1.08	1.06	-2.23	-49.9	-16.1
1,701.0	1.80	55.40	1,698.6	18.4	38.4	3.83	-3.89	10.11	-67.8	-6.5
1,785.0	0.70	61.30	1,792.6	19.5	40.1	1.18	-1.17	6.28	-79.9	1.7
1,890.0	0.70	26.80	1,887.6	20.3	40.9	0.44	0.00	-36.32	-76.6	-48.9
1,984.0	1.10	14.80	1,981.6	21.7	41.4	0.47	0.43	-12.77	-73.7	-70.3
2,078.0	1.40	22.60	2,075.6	23.6	42.1	0.37	0.32	8.30	-92.9	-64.6
2,172.0	1.50	37.30	2,169.5	25.7	43.3	0.41	0.11	15.64	-118.0	-41.7
2,267.0	1.70	38.00	2,264.5	27.8	44.9	0.21	0.21	0.74	-130.7	-43.1
2,361.0	1.90	44.80	2,358.5	30.0	46.8	0.31	0.21	7.23	-147.4	-28.9



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2,456.0	2.30	51.40	2,453.4	32.3	49.4	0.49	0.42	6.95	-183.2	-12.1
2,550.0	0.10	52.60	2,547.4	33.5	51.0	2.34	-2.34	1.28	-175.2	-8.0
2,644.0	0.20	51.40	2,641.4	33.6	51.2	0.11	0.11	-1.28	-185.0	-13.3
2,738.0	0.30	195.40	2,735.4	33.5	51.2	0.51	0.11	153.19	149.4	125.8
2,833.0	2.70	225.90	2,830.3	31.7	49.6	2.58	2.53	32.11	199.9	34.2
2,927.0	3.50	226.50	2,924.2	28.2	45.9	0.85	0.85	0.84	204.9	33.5
3,022.0	5.10	224.10	3,018.9	23.2	40.8	1.69	1.68	-2.53	206.0	43.7
3,116.0	8.30	224.40	3,112.3	15.3	33.2	3.40	3.40	0.32	204.9	44.5
3,211.0	9.00	221.10	3,206.2	4.8	23.5	0.90	0.74	-3.47	197.4	58.2
3,306.0	8.70	218.40	3,300.0	-6.4	14.2	0.54	-0.32	-2.84	189.3	68.8
3,400.0	7.80	211.50	3,393.1	-17.4	6.4	1.42	-0.96	-7.34	175.2	94.9
3,494.0	7.30	201.50	3,486.3	-28.4	0.9	1.49	-0.53	-10.64	152.2	128.0
3,589.0	7.10	193.50	3,580.5	-39.7	-2.7	1.08	-0.21	-8.42	128.7	153.5
3,684.0	5.60	218.90	3,675.0	-49.1	-7.0	3.31	-1.58	26.74	181.4	89.3
3,778.0	7.30	261.00	3,768.4	-53.6	-15.8	5.20	1.81	44.79	194.2	-55.8
3,872.0	8.40	271.70	3,861.5	-54.3	-28.5	1.94	1.17	11.38	175.7	-95.4
3,967.0	8.70	273.30	3,955.5	-53.7	-42.6	0.40	0.32	1.68	166.6	-108.2
4,061.0	9.60	277.70	4,048.3	-52.2	-57.5	1.21	0.96	4.68	150.3	-124.7
4,156.0	10.00	269.50	4,141.9	-51.2	-73.6	1.53	0.42	-8.63	158.5	-109.0
4,250.0	10.60	267.10	4,234.4	-51.7	-80.4	0.78	0.84	-2.55	154.3	-107.9
4,344.0	10.20	252.40	4,326.8	-54.7	-107.0	2.85	-0.43	-15.64	169.2	-70.6
4,439.0	10.30	248.10	4,420.3	-60.4	-122.9	0.81	0.11	-4.53	166.7	-60.7
4,532.0	9.20	251.80	4,512.0	-65.8	-137.6	1.36	-1.18	3.98	158.0	-73.5
4,627.0	7.70	229.00	4,608.0	-72.4	-149.7	3.83	-1.58	-24.00	168.7	-9.6
4,721.0	9.50	217.80	4,698.9	-82.6	-159.2	2.61	1.91	-11.91	162.8	24.9
4,816.0	9.10	213.70	4,792.7	-95.1	-168.1	0.81	-0.42	-4.32	154.5	39.5
4,910.0	9.10	192.80	4,885.5	-108.5	-173.9	3.50	0.00	-22.23	123.4	95.8



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5,005.0	9.00	173.00	4,979.4	-123.2	-174.7	3.28	-0.11	-20.84	74.6	137.6
5,099.0	6.70	191.30	5,072.5	-135.9	-174.9	3.58	-2.45	19.47	108.2	116.8
5,194.0	5.60	197.80	5,166.9	-145.7	-177.4	1.37	-1.16	6.84	118.4	110.5
5,289.0	4.40	195.80	5,261.6	-153.7	-179.8	1.28	-1.26	-2.11	113.6	120.6
5,383.0	4.50	208.60	5,355.3	-160.4	-182.5	1.06	0.11	13.62	136.2	96.6
5,477.0	6.40	214.90	5,448.9	-167.9	-187.3	2.12	2.02	6.70	140.3	83.0
5,572.0	6.70	214.90	5,543.3	-176.8	-193.5	0.32	0.32	0.00	129.8	83.4
5,666.0	7.40	213.90	5,636.5	-186.3	-200.0	0.76	0.74	-1.06	116.8	85.6
5,761.0	8.00	217.90	5,730.7	-196.6	-207.5	0.85	0.63	4.21	109.7	77.7
5,855.0	7.00	228.80	5,823.9	-205.5	-215.8	1.85	-1.06	11.60	110.3	58.8
5,950.0	7.00	230.20	5,918.2	-213.1	-224.6	0.18	0.00	1.47	100.1	54.0
6,044.0	7.60	229.10	6,011.4	-220.8	-233.7	0.66	0.64	-1.17	87.1	55.8
6,138.0	7.20	228.40	6,104.6	-228.8	-242.8	0.44	-0.43	-0.74	74.3	56.8
6,232.0	6.50	233.80	6,198.0	-235.8	-251.5	1.01	-0.74	5.74	68.1	50.0
6,327.0	5.80	242.60	6,292.4	-241.2	-260.1	1.23	-0.74	9.26	64.9	39.7
6,421.0	4.90	254.70	6,386.0	-244.5	-268.2	1.53	-0.96	12.87	63.1	26.1
6,516.0	4.50	251.80	6,480.7	-246.7	-275.6	0.49	-0.42	-3.05	54.0	29.1
6,610.0	4.50	254.50	6,574.4	-248.8	-282.7	0.23	0.00	2.87	47.9	26.7
6,704.0	4.60	253.80	6,668.1	-250.9	-289.9	0.12	0.11	-0.74	40.1	27.2
6,798.0	5.30	252.90	6,761.7	-253.2	-297.6	0.75	0.74	-0.96	31.5	27.8
6,892.0	5.50	253.10	6,855.3	-255.8	-306.1	0.21	0.21	0.21	22.8	27.7
6,987.0	4.80	255.70	6,949.8	-258.1	-314.3	0.78	-0.74	2.74	15.5	26.8
7,081.0	3.50	263.70	7,043.7	-259.4	-321.0	1.51	-1.38	8.51	12.4	24.9
7,175.0	1.20	262.20	7,137.6	-259.8	-324.8	2.45	-2.45	-1.60	7.9	25.1
7,269.0	0.70	267.80	7,231.6	-260.0	-326.3	0.54	-0.53	5.96	8.7	24.3
7,364.0	0.70	255.20	7,326.6	-260.2	-327.5	0.16	0.00	-13.28	2.1	25.5
7,458.0	0.70	255.20	7,420.6	-260.5	-328.6	0.00	0.00	0.00	0.9	25.5



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7,552.0	0.30	252.30	7,514.6	-260.7	-329.4	0.43	-0.43	-3.09	-1.2	25.5	
7,647.0	0.80	55.00	7,609.6	-260.4	-329.1	1.15	0.53	171.26	8.3	-23.9	
7,741.0	0.50	58.70	7,703.8	-259.8	-328.2	0.32	-0.32	3.94	5.7	-24.4	
7,836.0	0.60	108.30	7,798.6	-258.7	-327.4	0.48	0.11	52.21	-15.6	-19.8	
7,930.0	0.50	142.10	7,892.6	-260.2	-326.6	0.36	-0.11	35.96	-24.8	-7.5	
8,025.0	0.70	148.50	7,987.6	-261.0	-326.1	0.22	0.21	6.74	-26.5	-4.6	
8,119.0	0.90	166.10	8,081.6	-262.2	-325.6	0.33	0.21	18.72	-28.0	3.8	
8,213.0	1.10	170.00	8,175.5	-263.8	-325.3	0.22	0.21	4.15	-29.3	5.7	
8,307.0	1.10	166.80	8,269.5	-265.6	-324.9	0.07	0.00	-3.40	-31.3	4.0	
8,401.0	0.80	101.10	8,363.5	-266.6	-324.1	1.13	-0.32	-69.89	-17.6	-27.7	
8,496.0	1.20	82.80	8,458.5	-266.6	-322.4	0.53	0.42	-19.26	-9.6	-32.1	
8,590.0	1.10	99.40	8,552.5	-266.6	-320.6	0.37	-0.11	17.66	-20.2	-27.7	
8,685.0	1.00	93.10	8,647.5	-266.8	-318.8	0.16	-0.11	-6.63	-18.8	-29.9	
8,779.0	0.70	105.10	8,741.5	-267.0	-317.5	0.37	-0.32	12.77	-26.0	-25.1	
8,873.0	0.60	131.90	8,835.4	-267.5	-316.5	0.34	-0.11	28.51	-35.5	-10.4	
8,968.0	0.80	139.10	8,930.4	-268.3	-315.7	0.23	0.21	7.58	-37.7	-5.8	
9,063.0	1.00	148.00	9,025.4	-269.5	-314.9	0.26	0.21	9.37	-39.6	0.2	
9,157.0	0.80	162.30	9,119.4	-270.9	-314.2	0.32	-0.21	15.21	-39.8	10.1	
9,251.0	0.60	176.50	9,213.4	-272.0	-314.0	0.28	-0.21	15.11	-37.2	19.8	
9,346.0	0.70	191.90	9,308.4	-273.0	-314.1	0.21	0.11	16.21	-31.7	29.1	
9,440.0	0.30	208.00	9,402.4	-273.8	-314.3	0.45	-0.43	17.13	-23.2	36.9	
9,536.0	1.10	354.30	9,498.4	-273.1	-314.5	1.42	0.83	152.40	39.1	-17.7	
9,630.0	0.40	354.80	9,592.4	-271.9	-314.6	0.74	-0.74	0.53	37.7	-18.0	
9,725.0	0.30	215.50	9,687.4	-271.8	-314.8	0.69	-0.11	-146.63	-16.8	38.0	
9,819.0	1.20	338.50	9,781.4	-271.1	-315.3	1.47	0.96	130.85	40.2	-6.4	
9,913.0	1.50	352.80	9,875.4	-268.9	-315.8	0.48	0.32	15.21	35.2	-15.8	
10,007.0	0.00	59.60	9,969.3	-267.7	-316.0	1.60	-1.60	0.00	31.7	-20.0	



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10,102.0	0.70	233.60	10,064.3	-268.0	-316.5	0.74	0.74	0.00	-3.3	37.4
10,186.0	0.40	287.30	10,158.3	-268.3	-317.2	0.80	-0.32	57.13	27.5	25.2
10,291.0	0.30	349.30	10,253.3	-267.9	-317.6	0.39	-0.11	65.26	34.8	-12.1
10,385.0	0.80	318.50	10,347.3	-267.3	-318.0	0.40	0.32	-32.77	35.4	7.3
10,479.0	1.00	325.90	10,441.3	-266.3	-318.8	0.44	0.43	7.87	34.7	2.7
10,573.0	2.20	316.20	10,535.3	-264.3	-320.5	1.30	1.28	-10.32	31.2	8.4
10,668.0	1.50	326.20	10,630.2	-262.0	-322.4	0.81	-0.74	10.53	29.1	3.2
10,763.0	1.00	349.60	10,725.2	-260.1	-323.3	0.74	-0.53	24.63	26.0	-8.2
10,857.0	1.00	343.50	10,819.2	-258.5	-323.6	0.11	0.00	-6.49	25.1	-5.5
10,952.0	0.80	306.30	10,914.2	-257.3	-324.4	0.64	-0.21	-39.16	22.0	10.3
11,046.0	0.80	288.30	11,008.2	-256.7	-325.6	0.27	0.00	-19.15	16.4	16.4
11,140.0	0.50	325.90	11,102.2	-256.2	-326.4	0.54	-0.32	40.00	22.1	3.4
11,234.0	0.20	34.70	11,196.2	-255.7	-326.6	0.50	-0.32	73.19	10.8	-19.0
11,329.0	0.80	227.20	11,291.2	-255.9	-326.8	0.84	0.42	-176.32	-6.8	20.8
11,423.0	1.60	234.00	11,385.1	-257.0	-328.2	1.07	1.06	7.23	-6.1	21.6
11,517.0	2.50	213.30	11,479.1	-259.5	-330.4	1.23	0.96	-22.02	-16.6	17.6
11,611.0	1.50	220.00	11,573.0	-262.2	-332.4	1.09	-1.06	7.13	-17.7	19.6
11,706.0	1.30	188.20	11,668.0	-264.2	-333.3	0.88	-0.21	-35.56	-27.7	5.8
11,761.0	1.70	179.50	11,723.0	-265.6	-333.3	0.79	0.73	-12.18	-29.6	2.4
11,800.0	1.80	179.71	11,782.0	-266.8	-333.3	0.26	0.26	0.54	-30.8	2.5
11,840.0	1.90	179.90	11,801.9	-268.1	-333.3	0.25	0.25	0.47	-32.1	2.6
11,920.0	1.02	246.74	11,881.9	-269.7	-334.0	2.21	-1.10	83.55	-11.4	31.8
11,933.0	1.10	261.70	11,894.9	-269.8	-334.2	2.21	0.62	115.08	-3.1	33.7
11,980.0	7.70	332.30	11,941.8	-267.0	-336.1	15.76	14.04	150.21	27.8	14.7
12,028.0	16.20	341.50	11,988.7	-257.8	-339.7	16.09	17.71	19.17	23.9	11.3
12,075.0	21.60	346.60	12,033.1	-243.2	-343.8	12.00	11.49	10.85	17.7	10.5
12,122.0	28.10	345.00	12,075.8	-224.1	-348.7	13.80	13.83	-3.40	9.9	12.2



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Dillon 31 Fed Com
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 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #702H
 TVD Reference: KB = 25' @ 3461.0usft
 MD Reference: KB = 25' @ 3461.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Bulid (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
12,169.0	32.90	346.80	12,116.3	-200.9	-354.5	10.40	10.21	3.83	2.6	13.7
12,216.0	35.60	351.00	12,155.1	-175.0	-359.5	7.83	5.74	8.94	-2.8	14.8
12,263.0	41.20	354.00	12,191.9	-146.0	-363.3	12.55	11.91	6.38	-7.2	14.7
12,311.0	47.70	352.40	12,226.2	-112.7	-367.3	13.74	13.54	-3.33	-12.9	13.9
12,358.0	51.90	353.50	12,258.5	-77.1	-371.7	9.11	8.94	2.34	-17.7	13.5
12,405.0	53.00	352.50	12,285.2	-40.1	-376.2	2.88	2.34	-2.13	-20.1	12.6
12,452.0	56.30	354.50	12,312.3	-2.0	-380.6	7.83	7.02	4.26	-19.2	11.9
12,500.0	64.30	353.70	12,336.1	39.4	-384.9	16.73	16.67	-1.67	-18.4	10.2
12,547.0	74.70	353.10	12,352.5	83.1	-389.9	22.16	22.13	-1.28	-20.2	9.0
12,594.0	80.30	353.20	12,362.7	128.6	-395.4	11.92	11.91	0.21	-23.6	8.1
12,641.0	81.90	353.10	12,370.0	174.7	-400.9	3.41	3.40	-0.21	-25.2	7.1
12,688.0	82.20	353.30	12,378.5	221.0	-406.4	0.76	0.84	0.43	-22.7	6.0
12,735.0	85.70	354.80	12,381.4	267.4	-411.3	8.09	7.45	3.19	-17.6	4.5
12,783.0	90.60	355.60	12,383.0	315.2	-415.3	10.34	10.21	1.67	-15.5	3.0
12,877.0	93.30	0.90	12,379.8	409.1	-418.2	6.32	2.87	5.84	-17.4	-1.4
12,972.0	89.90	3.40	12,377.1	504.0	-414.6	4.44	-3.58	2.63	-18.8	-7.6
13,066.0	88.80	1.20	12,378.2	597.9	-410.8	2.62	-1.17	-2.34	-16.5	-12.2
13,160.0	88.40	359.80	12,379.7	691.9	-410.0	1.62	0.64	-1.49	-13.8	-13.8
13,254.0	88.30	0.00	12,381.6	785.8	-410.2	1.19	-1.17	0.21	-10.8	-14.4
13,348.0	87.40	359.90	12,385.1	879.8	-410.3	0.96	-0.96	-0.11	-6.3	-15.1
13,443.0	88.00	1.10	12,388.1	974.7	-409.4	2.10	1.68	1.26	-2.4	-16.7
13,537.0	89.40	357.60	12,389.4	1,068.7	-410.5	3.75	0.43	-3.72	-0.1	-16.4
13,631.0	92.50	357.30	12,387.8	1,162.6	-414.7	3.31	3.30	-0.32	-0.7	-13.0
13,726.0	92.80	358.20	12,383.4	1,257.4	-418.4	1.00	0.32	0.95	-4.1	-10.1
13,820.0	93.00	359.80	12,378.7	1,351.3	-420.0	1.71	0.21	1.70	-7.9	-9.3
13,914.0	93.90	0.10	12,373.0	1,445.1	-420.1	1.01	0.96	0.32	-12.8	-10.0
14,009.0	93.60	0.40	12,366.8	1,539.9	-419.7	0.45	-0.32	0.32	-17.8	-11.2



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Dillon 31 Fed Com
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 Wellbore: OH
 Design: OH

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 TVD Reference: KB = 25' @ 3481.0usft
 MD Reference: KB = 25' @ 3481.0usft
 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)
14,103.0	88.60	0.60	12,365.0	1,633.8	-418.9	5.32	-5.32	0.21	-18.7	-12.8
14,188.0	87.30	1.60	12,368.4	1,728.8	-417.1	1.73	-1.37	1.05	-14.1	-15.4
14,282.0	90.40	359.80	12,370.3	1,822.7	-415.9	3.81	3.30	-1.91	-10.4	-17.3
14,388.0	90.90	356.70	12,369.2	1,916.6	-418.8	3.34	0.53	-3.30	-9.7	-15.2
14,480.0	90.70	356.90	12,367.9	2,010.5	-424.0	0.30	-0.21	0.21	-9.3	-10.8
14,575.0	94.00	356.20	12,364.0	2,105.2	-429.7	3.55	3.47	-0.74	-11.3	-5.9
14,669.0	95.80	357.20	12,358.0	2,198.7	-435.1	2.19	1.91	1.08	-17.6	-1.3
14,763.0	95.30	357.80	12,346.9	2,292.2	-439.2	0.83	-0.53	0.84	-24.9	2.1
14,857.0	95.30	359.00	12,338.2	2,385.8	-441.8	1.27	0.00	1.28	-31.8	3.9
14,951.0	90.70	359.60	12,333.3	2,479.6	-443.0	4.93	-4.89	0.64	-34.9	4.2
15,046.0	88.60	0.50	12,333.0	2,574.6	-442.9	1.50	-1.16	0.95	-33.3	3.3
15,140.0	91.00	0.70	12,332.6	2,668.6	-441.9	1.50	1.49	0.21	-32.0	1.6
15,234.0	93.80	2.90	12,328.6	2,762.4	-439.0	3.79	2.98	2.34	-34.2	-2.2
15,274.0	95.30	4.10	12,325.4	2,802.2	-436.5	4.80	3.75	3.00	-36.3	-5.0
15,368.0	95.30	1.70	12,316.8	2,895.7	-431.8	2.54	0.00	-2.55	-42.5	-10.5
15,462.0	94.60	2.40	12,308.8	2,989.3	-428.4	1.05	-0.74	0.74	-48.1	-14.7
15,557.0	93.80	2.80	12,301.6	3,083.9	-424.1	0.85	-0.74	0.42	-52.6	-19.8
15,651.0	93.40	1.70	12,295.6	3,177.7	-420.5	1.28	-0.53	-1.17	-56.1	-24.2
15,746.0	91.90	1.20	12,291.2	3,272.5	-418.1	1.66	-1.58	-0.53	-58.0	-27.4
15,840.0	90.10	1.20	12,289.6	3,366.5	-416.1	1.91	-1.91	0.00	-57.2	-30.1
15,934.0	89.70	0.70	12,289.8	3,460.5	-414.5	0.68	-0.43	-0.53	-54.5	-32.5
16,029.0	89.60	359.80	12,290.3	3,555.5	-414.3	1.16	-0.11	-1.16	-51.4	-33.5
16,123.0	90.60	358.20	12,280.2	3,649.5	-416.1	1.83	1.08	-1.49	-49.1	-32.4
16,218.0	90.80	355.90	12,289.0	3,744.3	-421.0	2.43	0.21	-2.42	-47.8	-26.3
16,312.0	90.20	355.50	12,288.2	3,838.0	-428.0	0.77	-0.64	-0.43	-46.2	-22.0
16,406.0	91.10	355.50	12,287.1	3,931.8	-435.4	0.98	0.96	0.00	-44.7	-15.4
16,500.0	90.40	354.70	12,285.9	4,025.4	-443.4	1.13	-0.74	-0.85	-43.5	-8.2



Midland PVA

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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)
16,585.0	89.40	353.60	12,286.1	4,119.9	-452.9	1.42	-1.05	-0.95	-40.8	0.5
16,689.0	88.50	356.90	12,287.8	4,213.6	-460.6	3.43	-0.96	3.30	-36.5	7.3
16,783.0	88.50	357.10	12,290.2	4,307.4	-465.5	0.21	0.00	0.21	-31.6	11.4
16,878.0	91.80	359.10	12,290.2	4,402.4	-468.6	3.88	3.28	2.11	-29.2	13.8
16,972.0	93.00	359.80	12,288.4	4,496.3	-469.5	1.66	1.49	0.74	-30.5	13.9
17,066.0	93.20	0.60	12,281.3	4,590.1	-469.2	0.88	0.21	0.85	-33.1	12.7
17,160.0	93.40	0.70	12,275.9	4,684.0	-468.1	0.24	0.21	0.11	-36.0	10.9
17,255.0	94.00	0.60	12,269.8	4,778.8	-467.1	0.64	0.63	-0.11	-39.6	9.0
17,349.0	93.80	359.60	12,263.4	4,872.5	-466.9	1.08	-0.21	-1.06	-43.5	8.1
17,444.0	93.50	359.10	12,257.3	4,967.3	-466.0	0.61	-0.32	-0.53	-47.0	8.4
17,538.0	92.00	358.10	12,252.8	5,061.2	-470.3	1.92	-1.60	-1.06	-49.0	9.9
17,632.0	88.40	358.10	12,252.5	5,155.1	-473.4	3.83	-3.83	0.00	-46.9	12.3
17,726.0	89.60	359.40	12,254.1	5,249.1	-475.4	1.88	1.28	1.38	-42.8	13.5
17,821.0	88.50	359.20	12,255.7	5,344.1	-476.6	1.18	-1.18	-0.21	-38.7	13.9
17,915.0	91.20	359.50	12,255.9	5,438.1	-477.7	2.89	2.87	0.32	-38.0	14.1
18,009.0	91.50	0.40	12,253.7	5,532.0	-477.8	1.01	0.32	0.96	-38.1	13.4
18,104.0	90.50	0.20	12,252.1	5,627.0	-477.3	1.07	-1.05	-0.21	-35.5	12.1
18,199.0	90.30	0.90	12,251.4	5,722.0	-476.3	0.77	-0.21	0.74	-33.9	10.4
18,293.0	92.80	1.40	12,248.9	5,815.9	-474.5	2.71	2.66	0.53	-34.2	7.7
18,387.0	92.50	358.00	12,244.5	5,909.8	-474.9	3.63	-0.32	-3.62	-36.4	7.5
18,482.0	93.30	358.40	12,239.7	6,004.7	-477.9	0.94	0.84	0.42	-38.9	9.6
18,576.0	90.80	359.80	12,236.4	6,098.6	-479.3	3.10	-2.66	1.60	-40.1	10.2
18,670.0	90.30	359.70	12,235.4	6,192.6	-479.6	0.57	-0.53	-0.21	-38.8	9.8
18,765.0	91.50	0.20	12,234.0	6,287.6	-479.7	1.37	1.28	0.53	-38.0	9.0
18,859.0	92.40	0.60	12,230.8	6,381.5	-479.1	1.05	0.96	0.43	-39.0	7.6
18,952.0	93.40	358.80	12,226.1	6,474.4	-479.6	2.21	1.08	-1.94	-41.5	7.3
19,047.0	90.80	359.50	12,222.6	6,569.3	-481.0	2.83	-2.74	0.74	-42.8	7.9



Midland PVA

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 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)
19,141.0	89.60	0.00	12,222.2	6,663.3	-481.4	1.38	-1.28	0.53	-40.9	7.8
19,238.0	89.00	0.60	12,223.4	6,758.3	-480.9	0.89	-0.63	0.63	-37.5	8.3
19,331.0	91.40	359.70	12,223.1	6,853.3	-480.6	2.70	2.53	-0.95	-35.6	5.2
19,426.0	91.80	359.70	12,220.4	6,948.2	-481.1	0.42	0.42	0.00	-38.0	4.9
19,520.0	92.30	0.20	12,217.1	7,042.2	-481.2	0.75	0.53	0.53	-37.2	4.2
19,615.0	92.30	0.60	12,213.2	7,137.1	-480.5	0.42	0.00	0.42	-38.8	2.7
19,709.0	92.70	1.30	12,209.1	7,231.0	-479.0	0.88	0.43	0.74	-40.6	0.4
19,803.0	95.20	1.60	12,202.7	7,324.7	-478.6	2.68	2.68	0.32	-44.9	-2.8
19,898.0	94.20	1.90	12,194.9	7,419.4	-473.7	1.10	-1.05	0.32	-50.5	-8.5
19,944.0	94.80	2.00	12,191.3	7,465.2	-472.2	1.32	1.30	0.22	-53.0	-8.4
19,991.0	95.00	2.10	12,187.3	7,512.0	-470.5	0.48	0.43	0.21	-55.9	-10.5

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
11,920.0	11,881.9	-269.7	-334.0	KOP, MD:11920.0', TVD:11881.9', N/S:-269.7', E/W:-334.0', INC:1.02
12,196.5	12,139.1	-186.0	-357.6	FTP Crossing, MD:12196.5', TVD:12139.1', N/S:-186.0', E/W:-357.6', INC:34.46
19,944.0	12,191.3	7,465.2	-472.2	Last MWD Survey (MD=19944.0')
19,991.0	12,187.3	7,512.0	-470.5	Projection to Bit (MD=19991.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Dillon 31 Fed Com #702H

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: #702H

KB = 25' @ 3481.0usft 3438.0
Northing 425888.00 Easting 797884.00 Latitude 32° 10' 3.260 N Longitude 103° 30' 15.240 W

To convert a Magnetic Direction to a Grid Direction, Add 9.32°
To convert a Magnetic Direction to a True Direction, Add 9.70° East
To convert a True Direction to a Grid Direction, Subtract 0.44°

SECTION DETAILS

Seq	MD	Ino	Az	TVD	+N-S	+E-W	Dieg	TFace	VBect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1300.0	0.00	0.00	1300.0	0.0	0.0	0.00	0.00	0.0	
3	1600.2	8.00	234.92	1599.8	-9.0	-12.9	2.00	234.92	-8.2	
4	8228.8	8.00	234.92	5205.4	-227.0	-323.1	0.00	0.00	-205.9	
5	5826.0	0.00	0.00	5505.0	-236.0	-336.0	2.00	180.00	-214.1	
6	11943.0	0.00	0.00	11922.0	-236.0	-336.0	0.00	0.00	-214.1	
7	12599.3	90.75	351.98	12359.4	243.1	-403.5	12.00	351.98	261.3	
8	12950.8	90.75	359.52	12396.1	493.4	-422.1	3.00	90.00	519.4	
9	13186.8	90.75	359.52	12393.0	729.4	-424.1	0.00	0.00	755.0	TGT#1(Dillon 31 Fed Com #702H)
10	13194.7	90.89	359.52	12392.9	737.5	-424.2	2.00	178.54	763.1	
11	14165.2	90.89	359.52	12383.0	1697.9	-432.2	0.00	0.00	1722.0	TGT#2(Dillon 31 Fed Com #702H)
12	14180.2	91.09	359.52	12382.6	1723.0	-432.4	2.00	0.00	1747.1	
13	16210.0	91.09	359.52	12383.0	2762.5	-441.0	0.00	0.00	2775.0	TGT#3(Dillon 31 Fed Com #702H)
14	16231.3	91.52	359.52	12362.8	2773.8	-441.2	2.00	0.00	2798.3	
15	17854.9	91.52	359.52	12293.0	8399.4	-463.2	0.00	0.00	8416.0	TGT#4(Dillon 31 Fed Com #702H)
16	17863.4	91.35	359.52	12292.8	8404.9	-463.3	2.00	-180.00	8423.4	
17	19979.2	91.35	359.52	12243.0	7620.0	-481.0	0.00	0.00	7535.4	PBHL(Dillon 31 Fed Com #702H)

CASING DETAILS

No casing data is available

WELLSBORE YARDY DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
Brushy Top(Dillon 31 Fed Com #702H)	7823.0	-238.0	-358.0	425420.00	797568.00
PBHL(Dillon 31 Fed Com #702H)	12243.0	-752.0	-481.0	433208.00	797423.00
TGT#4(Dillon 31 Fed Com #702H)	12283.0	8399.4	-463.2	431082.40	797420.80
TGT#3(Dillon 31 Fed Com #702H)	12283.0	2762.5	-441.0	439439.20	797442.95
TGT#2(Dillon 31 Fed Com #702H)	12283.0	1697.9	-432.2	427383.80	797451.79
TGT#1(Dillon 31 Fed Com #702H)	12329.0	729.4	-424.1	426418.40	797459.31
FTP(Dillon 31 Fed Com #702H)	14023.0	-158.0	-418.0	425500.00	797468.00

